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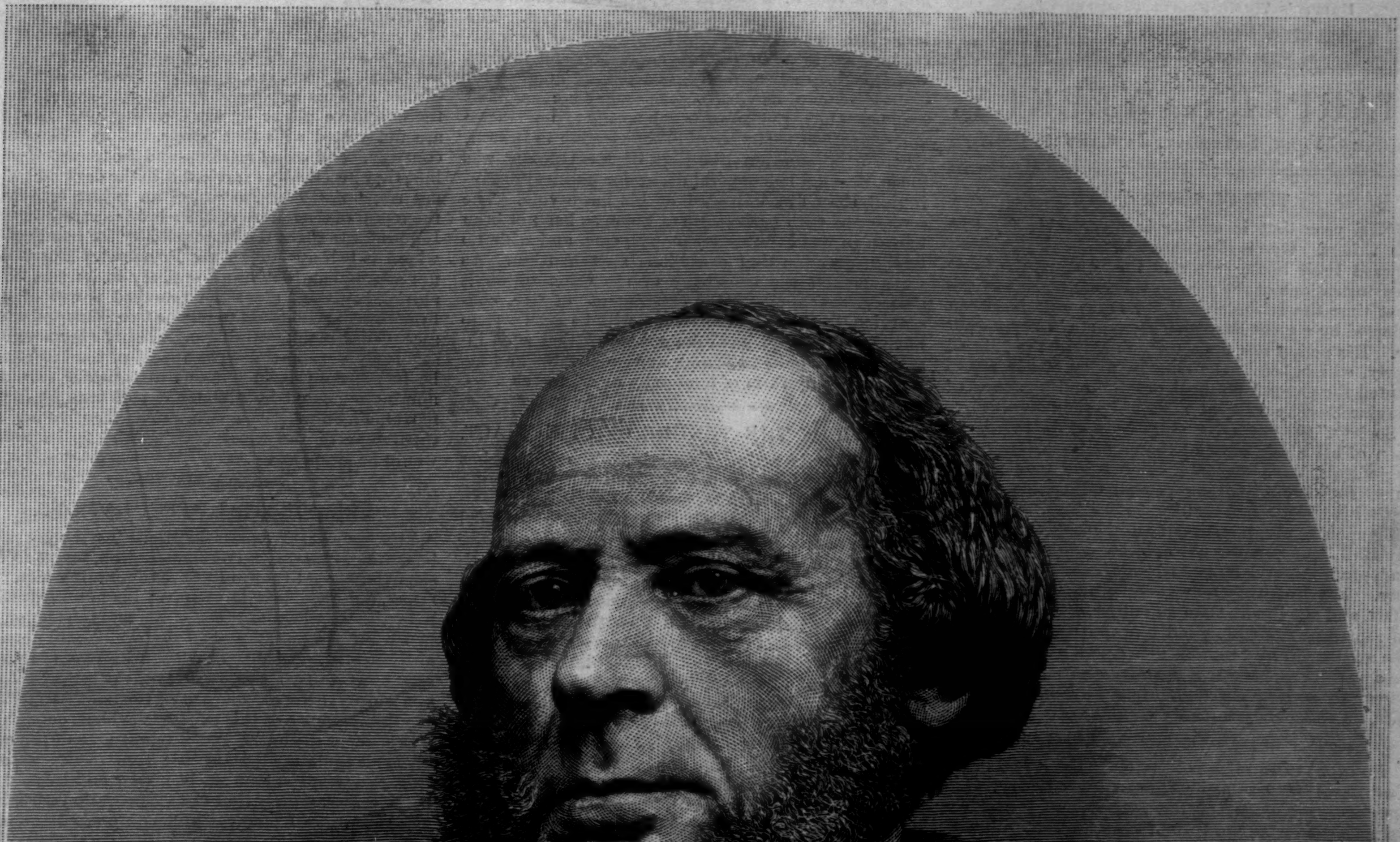

R. STAUDENBAUR Sc.

JOHN ERICSSON.—[See Page 10.]

"Harper's Young People grows better and better every year."—*New York Herald, December 5, 1886.*

HARPER'S YOUNG PEOPLE,

An Illustrated Weekly.

The number for December 28 is a "New-year Number," and opens with a New-year story, entitled "The Forrestville Bicycle," by **John R. Coryell**, *a popular writer of boys' stories. It is illustrated by* **Albert E. Sterner**.

An article entitled "A Young Hero" recites the acts of "courage, heroism, and humanity" for which a youth of fifteen received the Congressional Life-saving Medal. **Hiram Dudley Buck** *is the name of this young hero, whose portrait is given.*

The full-page picture by **Frederic Goodall, R.A.**, *is called*

"FAINT HEART NEVER WON FAIR LADY."

It is accompanied by a poem by **Margaret Vandegrift**.

Frederick Evans, Jun., *has an article on "College Cheers," and* **Howard Pyle** *a fairy tale, called "How the Princess's Pride was Broken."*

Harper's Young People, $2 00 per Year.

A specimen copy of Harper's Young People *will be sent on application.*

HARPER'S WEEKLY.

New York, Saturday, January 1, 1887.

THE CLOSING YEAR.

THE year that is ending is memorable for two things. One is the change in English sentiment toward Irish home rule, and the other is the labor demonstrations of the year in this country. For the first time the Irish demand for home rule has been adopted by a great English statesman and party leader. His action has practically dissolved the Liberal party, which, before the change, undoubtedly represented the general political opinion and tendency of England. The Liberal schism is very significant. "Society," the clubs, the great body of distinguished men of all kinds, most of the chief newspapers and periodicals, have declared against the new policy. **John Bright**, a life-long Liberal leader, has parted with his friend **Gladstone**. Lord **Tennyson**, verging upon eighty, has sung the antistrophe of "Locksley Hall," the burning hymn of his youth to freedom and progress, and laments Democracy and the evil day. The Minister who was called the people's **William**, and who, more than any other, recently seemed to represent the conviction and gratify the pride of the average Englishman, is denounced as an imbecile or a maniac, a British statesman who closes a great career by seeking the dissolution of the British Empire, an octogenarian madly emulous of

> "The aspiring youth who fired the Ephesian dome."

No event in English politics since the repeal of the Corn-laws has so deeply excited the country. The spectacular incident of the delivery of Mr. **Gladstone**'s speech in April, and the debate that followed, was succeeded by a radical breach in the Liberal party, the defeat and resignation of the Ministry, a dissolution of Parliament, a short and earnest campaign, a signal defeat at the polls, the return of a large Parliamentary majority of Tories and Union-Liberals, and a Tory Ministry, after the first place had been offered to Lord **Hartington**, the leader of the Liberal secession. The assembly of Parliament was followed by the hope, rather than by any reasonable prospect, of Liberal reunion. But, as usual when such a breach occurs, it is wider and more irreconcilable than ever, and the seceding Liberals support, and promise to support, the most strenuous measures to restore order in Ireland. Meanwhile Irish leaders have adopted a "plan of campaign," a scheme which provides for the payment to agents of the Irish Nationalist League, as trustees, of that amount of rent which tenants feel to be a just payment under the circumstances. This plan is approved by the Catholic Primate of Ireland, on the ground that the landlord and the tenant are parties to a contract which one side may interpret as legitimately as the other, and that the law authorizing certain courts under certain conditions to regulate rents is a declaration that the will of one party to the contract is not to govern. But neither Mr. **Gladstone** nor Mr. **Parnell** nor the home rule Liberal press in England approves the "plan of campaign," and the arrest of Irish leaders for conspiracy to defraud, the disagreement between them and their English allies, and the undoubted persistence of the Irish, portends a Tory policy of coercion and continued disturbance of the political situation. The situation, as the year opens, seems to make more evident the simple alternative of a rigorous subjugation of Ireland, or some form of home rule.

In this country the spring saw a "labor demonstration" at the West, and simultaneous local strikes and boycotts, culminating in the anarchist massacre at Chicago, which plainly disclosed the fact of extensive and powerful labor organizations largely controlled by foreigners trained in the socialist and anarchist theories of Europe. The nature of the boycott as a conspiracy against peaceable citizens lawfully engaged, and as an unjustifiable interference with the fundamental conditions of free government, was demonstrated by the conviction and punishment of boycotters in New York. But the chief result of the movement in the spring was to show that, with all the instances of outbreak, especially in Illinois and Wisconsin, and with all the attempts to overbear individual liberty, there was no general disposition to resort to force as a solution of the situation; but, on the contrary, the two chief organizations, the Knights of Labor, and especially the Brotherhood of Locomotive Engineers, insisted upon a peaceful settlement. The gravity of the situation arose, and will hereafter arise, from the large number of foreign members and leaders who have no knowledge of American institutions, no sympathy for American ideas, and who are profoundly ignorant of economic principles and of history. The movement led at the close of the year to the nomination of Mr. **Henry George**, an American citizen who has devoted himself to the study of economical questions, for the Mayoralty of New York, and to a vote of 68,000 in support of his candidacy after a very vigorous and interesting canvass. The large vote was significant of the strong public interest in what is called the labor question—an interest which is fortunate as implying a prompt and careful consideration of its various aspects, and a consequent avoidance of the violence which springs from silence and depression. The result of the election in Boston, where a nomination like that of Mr. **George** was made, shows a less general desire for political organization than was indicated by his large vote. The year opens with such peace at home as has not been known in this country for many years, and with no foreign question that can excite apprehension. As we approach the centenary of the Constitution it seems probable that "the experiment" of free, constitutional, popular institutions will be seen not to have failed, but to have demonstrated that such institutions are quite as strong and practicable and beneficent as any form of monarchy or aristocracy.

REPEAL OF THE TENURE OF OFFICE ACT.

Congress is acting promptly. The House has passed the electoral count bill, and the bill giving Indians land in severalty, and the Senate has repealed the tenure of office bill. But it has also defeated for the present the bill for open sessions to consider executive nominations, and it will probably practically defeat Mr. **Beck**'s bill in regard to Congressional attorneys for Congress-aided corporations. But the electoral count bill and the Indian bill, with the repeal of the tenure of office bill, are public benefits. The strenuous and able opponent of the repeal was Senator **Edmunds**. But Senators **Hoar** and **Evarts** favored it. The debate was short, and the vote was 30 for repeal and 22 against it. Four Republicans only supported it, Mr. **Evarts** being absent. The four were Messrs. **Hoar**, **Chace** of Rhode Island, **Ingalls**, and **Mitchell** of Oregon. Twenty-six Democrats voted to repeal; twenty-two Republicans voted against repeal. There was little disposition to discuss the question. The arguments were really exhausted in the Congress of 1789, when the question was first raised, and in the Congress of 1835, when **Webster** made the strongest plea for the position Mr. **Edmunds** holds. Mr. **Webster**'s argument was very powerful, and it showed that the question cannot be finally settled. But he admitted that the decision of the contemporary Congress, containing many members of the Constitutional Convention, was of very great weight, and he conceded the uniform practice under the Constitution.

The tenure of office bill was not passed because of any deliberate decision that the original decision of Congress was wrong, but to restrain President **Andrew Johnson**, who was believed to cherish purposes inconsistent with the settlements of the war, and to intend trouble. It was a bill to prevent mischief then especially threatened. The veto was a strong constitutional argument, but Congress acted as a Committee of Public Safety, and overruled it. That the act was not regarded as a deliberate reversal of a great and settled constitutional conclusion was shown by the fact that immediately upon General **Grant**'s election the House of Representatives, almost by its first vote, passed a bill repealing the tenure of office law by a vote of 138 to 16. This action, as Senator **Hoar** says, was repeated in the following year by a vote of 159 to 25, and in 1872 without a division. He points out that every Senator who had served in the other House, except Mr. **Morrill**, whose term as Representative was before that time, whether Republican or Democrat, had voted for the repeal. But the Senate, having grasped the power, modified the law, but retained it upon the statute-book. The modification was very distasteful to General **Grant**, and he urged the repeal. The House by a vote of 129 to 25 again supported it. But the Senate did not yield. The practical argument against it could not be more strongly or concisely stated than in the words of Senator **Hoar**: "The effect of this legislation is to destroy Executive responsibility, so far as it has any effect at all." It forces upon the President against his will officers in whom he has no confidence, and he has a right to ask at the polls for a suspension of judgment against him because of his administration, on the ground that he has not been allowed to select the agents of administration.

Senator **Edmunds** said that the repeal was a step backward in reform, because it opened the gates to a clean sweep. But Senator **Hoar** replied conclusively that it was from the precise condition of affairs produced by the tenure of office bill that the civil service reform movement arose. Never was a partisan civil service so absolute and so irresponsible as under this law, which prostitutes the service to the political fortunes of Senatorial leaders. That this was the result in this State is a familiar fact, and Senator **Miller** has recently described it in an interview. "Senatorial courtesy" and the tenure of office law enabled a Senator to hold his retainers in practical despite of the President. "The appointments in Custom-houses, in the Internal Revenue service, and in the Post-office, which had been made in the interests and in the service of party, almost ever since the foundation of the government, ceased to be made even in the interest of a party, and came to be made in the interest of the political fortunes of special political leaders." The President, at least, is a single responsible officer who cannot hide his responsibility, and who is vested with the executive power by the Constitution. Senators are not vested with that power, but by "Senatorial courtesy," and secret sessions, and the tenure of office law, they practically exercised it in the dark and without responsibility. Instead of an injury to reform, the repeal of the tenure of office law is a signal service. It goes far to place the responsibility for nominations where it belongs—upon the President. But it does not accomplish that result entirely so long as "Senatorial courtesy" gives the practical power of confirmation in each State to one or two Senators, whose ascendency in determining nominations becomes consequently very great. The repeal of the law should be followed by open sessions to consider executive nominations, and by a statement of reasons for removal, which must be a voluntary executive act, and then some of the worst evils of the spoils system would be swept away.

PRESIDENTIAL SPECULATIONS.

The Democratic papers, in discussing the probabilities of Mr. **Cleveland**'s renomination, forget to consider the logical result of not renominating him. To reject the President is to reject his administration. Now the moral significance of his administration lies in his reform policy, and in the pacific and patriotic attitude of the "solid South." To refuse to renominate him would be to repudiate his policy of reform, and to revive the old distrust of the Southern feeling. The consequence of this course is evident enough. It would repel the entire Independent vote of the country, and limit the Democratic vote to the Bourbon Democracy. But he must be a very enthusiastic partisan who supposes that the Democratic party, independent of Mr. **Cleveland**, has impressed the country so profoundly during the last two years with its ability to govern wisely and well that, rejecting Mr. **Cleveland** as its candidate, it would be certainly successful.

Having passed him by, and having renounced his administration as the platform of '88, what and whom would the Democratic party substitute? Some names of what are called "old-fashioned Democrats" have been suggested. But old-fashioned Democracy is Bourbon Democracy, and that has been rejected by this country forever. Mr. **Cleveland** was elected solely because he was not an old-fashioned but a new-fashioned Democrat. He stood for a modern spirit, for a *post-bellum*, not an *ante-bellum*, view of the political situation of the country. Rejecting Mr. **Cleveland** and his administration, upon what policy or purpose does the Democratic party propose to plant itself? It cannot be revenue reform, because the Democratic House has just refused to countenance it. It cannot be civil service reform, because Mr. **Cleveland** is its party representative. It cannot be "turning the rascals out," because Democrats are in possession of the chief offices, and of half of the subordinate service, and a campaign conducted upon the cry of turning out the other half would be a campaign of inexhaustible laughter, ending in contemptuous Democratic defeat. It cannot be a sound silver policy, because the party has none. The only visible advantage of the Democratic party at this moment is Mr. **Cleveland** and his administration. To abandon them is practically to throw up the sponge.

The "old-fashioned" Democrats who have been named would pursue the same general course with Mr. **Cleveland**, or they would not. If they would pursue it, it would be obviously better to continue Mr. **Cleveland** in the Presidency. If they would not pursue it, a great vote would be alienated. The fundamental error of the Democrats who oppose the renomination of the President is that they apparently suppose the Democratic party to be an organized body, with distinct convictions and purposes, with which Mr. **Cleveland** does not wholly sympathize, but with which Governor **Hill**, for instance, or Mr. **Thurman**, or Mr. **Hewitt**, or Governor **Abbett**, does sympathize, and therefore that to nominate some such gentleman would harmoniously secure all the votes of the party.

But there are no such distinct convictions and purposes, and when the Democratic opposition to the President's renomination is brought to a definite statement, it appears, not that the President is unsound upon any Democratic principle or policy, so called, but that he has left some Republicans in office. That is the whole ground of opposition, so far as we have observed it, and old-fashioned Democracy is thus reduced to the demand of the Jacksonian Governor Kinney in Illinois fifty years ago, as reported by Messrs. Nicolay and Hay, that "all Whigs should be whipped out of office like dogs out of a meat-house." There are a great many voters of both parties who think that that proceeding is the great object of elections. But to defeat the renomination of Mr. Cleveland for that reason would be to defeat the Democratic party. Mr. Cleveland's renomination under the circumstances seems to us to depend wholly upon himself. A course which aimed to consolidate the Democratic party by listening to Bourbon counsels and acting upon them would still not commend the President to Bourbon favor. His true course for the country and for himself is to push resolutely forward in the spirit of his own strong convictions.

THE NEW SOUTH.

The new South, of which we spoke last week in connection with the Harper party, has found a striking and significant expression in the appearance of Mr. Trenholm, of South Carolina, the Comptroller of the Currency, and Mr. Grady, of Georgia, the editor of the Atlanta *Constitution*, as guests at the annual dinner of the New England Society, in Philadelphia and New York respectively. The strain of remark at these noted dinners is always patriotic, and the speeches naturally teem with glowing and tender allusions to the civil war and the Union soldiers. It was a signal sign, therefore, of the actual situation that two of the strongest Confederates should rise in the midst of such a Northern company as gather at these dinners, and by their personal bearing no less than by the earnestness and eloquence of their speeches should show to the most skeptical what worthy foes they had been, and what sincere friends they are.

To these distinguished orators who in the two great cities spoke for the new South must be added Mr. James Phelan, of Tennessee, who is just elected to Congress in the Memphis district, and who in his own district and among his own Southern fellow-citizens proved himself to be, with Mr. Trenholm and Mr. Grady, a man of broad comprehension and sagacious views. All of these gentlemen, it must be understood, speak as men who, without renunciation of their local feeling, of their State pride, or of their honor and affection for the men with whom they stood fast for what they held to be a true cause, own without reservation its defeat and the consequent total change of conditions in the life around them. Thus Mr. Phelan says:

> "Bitter to my taste as were the results of the civil war, day after day has reconciled me to them, and convinced me of the wisdom of cheerful submission to the will of Him who brought them about. The union of these States has been preserved and declared indissoluble. A great and disturbing constitutional question has been finally and forever settled, and slavery has been forever abolished; it no longer tarnishes the fair fame of a great and free republic. Because it was involved in the question of constitutional right, I fought four years in its defence. I tell you now, upon the honor of my manhood, that I would fight eight years, though my hairs are white, against any attempt to reinstate it in any portion of this continent."

Mr. Grady's speech was one of the most striking that have been delivered by any citizen of a Southern State since the war. It was very eloquent. His tribute to Abraham Lincoln was very impressive, and the effect of his address delivered to that New England company will be most serviceable to the country:

> "Great types, like valuable plants, are slow to flower and fruit, but from the union of these colonists came he who stands as the first typical American, the first who comprehended within himself all the strength and greatness, all the majesty and grace, of this republic—Abraham Lincoln. He was the sum of Puritan and Cavalier, for in his ardent nature were fused the virtues of both, and in the depths of his great soul the faults of both were lost; but he was greater than Puritan, greater than Cavalier, in that he was American, and in that in his homely form were first gathered the vast and sterling forces of this republic, charging it with such tremendous meaning and so elevating it above human suffering that martyrdom, though infamously aimed, came as a fitting crown to a life consecrated from the cradle to human liberty."

Mr. Grady said also:

> "The relations of the Southern people with the negro are close and cordial. We remember with what fidelity he guarded our defenceless women and children, whose husbands and fathers were fighting against his freedom. To his eternal credit be it said that whenever he struck a blow for his own liberty he fought in open battle, and when at last he raised his black and humble hands that the shackles might be struck off, those hands were innocent of wrong against his helpless charges, and worthy to be taken in loving grasp by every man who honors loyalty and devotion. Ruffians have maltreated him, rascals have misled him, but his treatment in the South to-day is an honorable protest against injustice to this simple and sincere people. Faith has been kept with him in spite of calumnious assertions to the contrary by those who assume to speak for us or by frank opponents. Faith will be kept with him in the future if the South holds her reason and integrity. The new South is enamored of her new work. Her soul is stirred with the breath of new life. As she stands, full-statured and equal among the people of the earth, breathing the keen air and looking out upon the limitless horizon, she understands that her emancipation came because, in the inscrutable wisdom of God, her honest purpose was crossed and her brave armies beaten. This is said in no spirit of time-serving and apology. I should be unjust to the South if I did not make this plain in this presence."

His closing appeal to New England whether she will "permit the prejudice of the war to remain in the hearts of the conquerors when it has died in the hearts of the conquered" was most touching and impressive. New England certainly would be recreant to her own best impulses if the appeal were not answered in the same manly and friendly spirit in which it is made.

This is the new South which, for every reason, has seemed to us worthy of the most careful study and detailed presentation. It was with that purpose that the Harper party visited the Southern States, and it is to continue the good work that the results of the changed circumstances to which Mr. Grady eloquently refers will be laid before our readers.

SOME RECENT REMOVALS.

Mr. Charles H. Ham, the Appraiser at Chicago, Mr. Combs, of Maryland, one of the four General Appraisers on the Atlantic coast, Captain Patten, of Maine, the Commissioner of Navigation, and Deputy Internal Revenue Commissioner Rogers, in Washington, have all been removed. Some of them were asked to resign, but that is only a form of removal.

If the offices held by these gentlemen are in any fair sense political offices, if the gentlemen have been in any way officially incompetent and unsatisfactory, or if they have violated the wise rule of a "quiet and unobtrusive exercise of individual political rights," there is no doubt that the removals were in accord with sound principles of the civil service. But if Mr. Ham was removed merely to make a place for Mr. Hoffman, and Captain Patten to make a place for Mr. Morton, and the two other gentlemen for a similar reason, the removals are signal illustrations of the spoils system of the public service.

As no reasons are publicly alleged, the public must decide upon such information as is accessible, and the opinion is universal, so far as we have seen, that these officers were all singularly competent, and in no sense offensive partisans. We regret sincerely the discredit which such changes necessarily cast upon the Executive. If they are deemed necessary to secure party support, the same necessity might be pleaded with equal force for disregard of reform in all suspensions and removals.

THE SURPLUS.

By a majority of 5 in a vote of 303, the House of Representatives has practically refused to consider a bill to reduce taxation. This is a refusal in the face of a surplus of about $100,000,000. The decision decides nothing but unwillingness to deal with the question at this time. It is a delay, that is all; because Congress cannot suppose that the country will consent to enormous over-taxation for the purpose of accumulating a fund to be distributed among the States, and to promote wild and corrupt expenditure.

The contest between parties will be over a scheme of reduction, which the protectionists will try to shape so as to save the present private bounties of the tariff, and the revenue reformers will hope to shape so as to secure the whole amount of tax to the Treasury. It is one of the most complex of struggles, because "the people," who on the one hand are to be relieved by lower duties, are on the other to be protected by higher wages.

It is impossible to adopt any plan without opening the whole question, and that was doubtless the reason that Mr. Randall and his band of Democratic protectionists united with the Republicans in simply and summarily postponing the debate. If the Republicans do not wish to be left in the position of merely maintaining a system of immense over-taxation, they will now submit some scheme of reduction, or of appropriation of the surplus. Practically, with the assistance of Mr. Randall, they now control the question in both Houses.

McQUADE.

McQuade has been sentenced to imprisonment at hard labor for seven years, and to pay a fine of $5000. If there by any virtue in punishment to prevent crimes like his, this sentence will be serviceable. The heaviest blow of the penalty, however, does not fall upon him, but, as the Recorder truly said, upon his wife and family, and it is a sorrow for which there is no remedy. McQuade himself has probably no sense of personal disgrace or shame. But he cannot think of the fate to which he dooms his family without some bitterness of feeling.

The punishment of the law is of a kind which is most deeply felt by men like McQuade, for it exacts from him seven years of hard work. Making a trade of politics is a favorite pursuit of men who are more intelligent than McQuade. But when they see, as in this case, the price that they may suddenly have to pay, they will hardly play the game without some concern.

The result of the trial will be a public benefit in destroying the common notion that the "boodle" game will really hurt nobody, and that it is of a kind in which actual hurt is impossible. But this case and the warning are not complete until briber and bribed are both undergoing punishment. The municipal year is ending happily. The success of Mayor Grace in removing Squire, and the conviction of Jaehne and McQuade, show that Tweed does not still rule us from his urn.

NEW CITIZENS.

The passage of the bill giving to Indians land in severalty, under certain conditions, marks an epoch in the Indian policy of this country. The number of Indians is not large—about 300,000; but the treatment of them is one of the most serious of our national problems. The most intelligent and friendly opinion is that the solution lies in admitting the Indian to equal citizenship, to the protection of the laws, and the individual ownership of land. This involves the total abandonment of the old policy which regarded them as a foreign people, and treated with them as tribes.

But it is plain that citizenship, and the protection of law, and the industrial ownership of land, would practicably be of little use to the really wild Indian. One hundred and sixty acres of farm land or three hundred and twenty acres of grazing land in the Great American Desert, for instance, would not support many Indians nor many whites. There are very few Indians who practically understand agriculture. This means that the passage of the bill must not be regarded as the end of all national care and supervision of the Indian, but merely as an important step toward making the end of such supervision possible.

The education at the Indian schools, which is a training in agricultural and mechanical arts, must be pursued more vigorously than ever. The encroachments upon the reservations, without securing perfect fair play for the Indian, must be resisted; and sneers at a "coddling" policy must be understood to be what they are, efforts to further such aggression by representing the government as foolishly indulgent. Patience and common-sense will solve the problem.

PERSONAL.

General Grant was an excellent draughtsman, but the only oil-painting he ever put his name to is a frontier landscape with Indian figures, which he presented to ex-Secretary Borie. Mr. Borie's nephew, who has become the owner of the picture, has sent it to Mrs. Grant as a Christmas gift. It is the only specimen of her husband's art work in her possession.

—The late Professor Archibald Alexander Hodge, of Princeton Theological Seminary, was a man of broad sympathies and considerable humor. One day an impecunious young graduate called with a letter of introduction to ask help in obtaining a pastorate. The document stated that he had a wife and baby, and was in a starving condition. "You have a wife?" asked the Professor. "Yes, sir." "And a baby?" "Yes, sir." "Is it plump and tender?" "Oh yes, sir." "Well, why not eat the baby?"

—No listener to the brilliant speech of Mr. Henry W. Grady, of the Atlanta *Constitution*, at the dinner of the New England Society of New York, will soon forget the patriotic points made by the Southern orator, or the tremendous enthusiasm which they evoked. Turning to General Sherman, who sat near him, Mr. Grady remarked: "I want to say to General Sherman, who is considered an able man in our parts—though some people think he is a kind of careless man about fire—that from the ashes left us in 1864 we have raised a brave and beautiful city; that somehow or other we have caught the sunshine in the bricks and mortar of our homes, and have builded therein not one single ignoble prejudice or memory."

—During his stay in this country M. De Munkacsy painted an admirable portrait of Mrs. Joseph Pulitzer, which is not less faithful as a likeness than beautiful as a work of art. A few evenings before the painter's departure Mr. Pulitzer entertained him at dinner, among the guests being Governor Hill, George W. Childs, Cyrus W. Field, and August Belmont.

—Mr. George W. Childs has not yet received the bill for the magnificent memorial fountain erected by his order at Stratford-on-Avon, nor does he know how many thousands of dollars the work will cost him. At the suggestion of his friend Dean Stanley, he told the Mayor of that city to go ahead, and send the bill to him; and after five or six years the cable now announces the completion of the enterprise.

—After seeing one of his paintings sell by auction for $45,500, Jules Breton, now in his sixtieth year, has begun to etch. His first work with the needle is a *remarque* to a luminous and exquisite etching after his last Salon picture, "Le Goûter," by Le Couteux, representing harvesters at luncheon.

—An esteemed contemporary remarks: "It is not generally known that General Wallace was during most of his life an infidel, and was converted to Christianity through an investigation of the Scriptures after listening to one of Colonel Robert G. Ingersoll's speeches against Christianity." This is a mistake. General Wallace never was an infidel. He was baptized in the Methodist Church when a child.

—Professor Hugh Archibald Clarke, the composer of the music for the chorus of the *Acharnians* in its recent presentation by the students of the University of Pennsylvania, is likely to receive a tangible return in the increased attention drawn to the musical department of the institution, which is to be reorganized and endowed.

—The Board of Trade Building in Chicago is connected with another building by a bridge, and a snow-fall having rendered this passageway unpleasant for those who had occasion to use it, Mr. B. P. Hutchinson, a director of the Board of Trade, requested the janitor to clear away the snow. An hour or so having passed without action by the janitor, Mr. Hutchinson procured a shovel and broom, and proceeded to do the work himself, greatly to the amusement of the brokers, who cheered lustily the resolute septuagenarian.

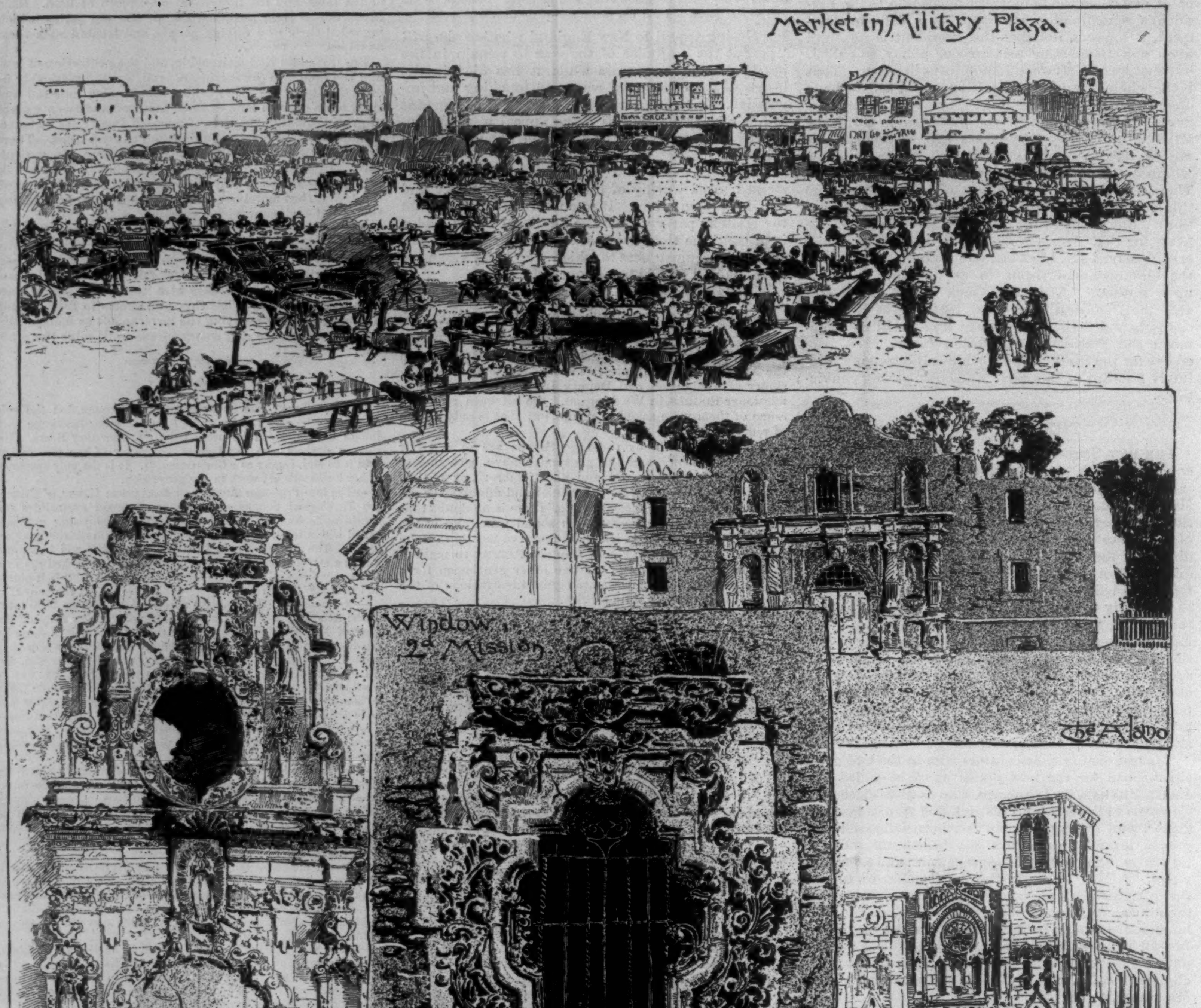
—Chang, the Chinese giant, invited Captain Costentenus, the tattooed man, to dinner at a *table d'hôte* restaurant. When the compliment was returned, at the same place, the waiter, knowing Chang's habits, brought five dinners for him, and Costentenus had to foot the bill. Then began an estrangement between the two curiosities.

—A Chinese millionaire named Chow Hop, with his American wife, arrived in San Francisco recently from San Antonio, Texas, on his way home to China. He went to California eighteen years ago, but left the State in a short time for Texas, where he has made a large fortune by lucky real estate speculations.

—Professor Rodalfo Lauciani, the Roman archæologist, who has been lecturing before the Lowell Institute at Boston, has a perfect mastery of English composition, and converses almost without accent, but in his public speaking he was at first deficient. To a friend, who noticed an improvement from evening to evening, he said: "I will tell you the secret. I asked Dr. Cotting [the curator] to sit in a back seat and hold up his hat when I began to be unintelligible. He got very tired at first."

—The Custom-house duties on a small canvas of Henri Regnault's, representing an Arab chieftain on horseback, and measuring about twenty inches square, were nearly $5000.

—On the corner of Butterfield and Thirty-third streets, Chicago, is a handsome building, the cost of which and the ground upon which it stands was $250,000. It is the Armour Mission, comprising a church, kindergarten, crèche, and dispensary. On the death of Joseph Armour, about three years ago, he left $100,000 for the erection of the mission, and the deceased's brother, P. D. Armour, to whom the execution of the plan was intrusted, added $150,000 of his own funds, the result being the present building. The expense of the mission is about $14,000 per year, and this income will be secured from the rent of forty-five flats which have been erected adjoining the mission.


Market in Military Plaza.
The Alamo
Window, 2d Mission
Doorway 2nd Mission.
The Cathedral.
1st Mission — "Conception"
Parade ground.

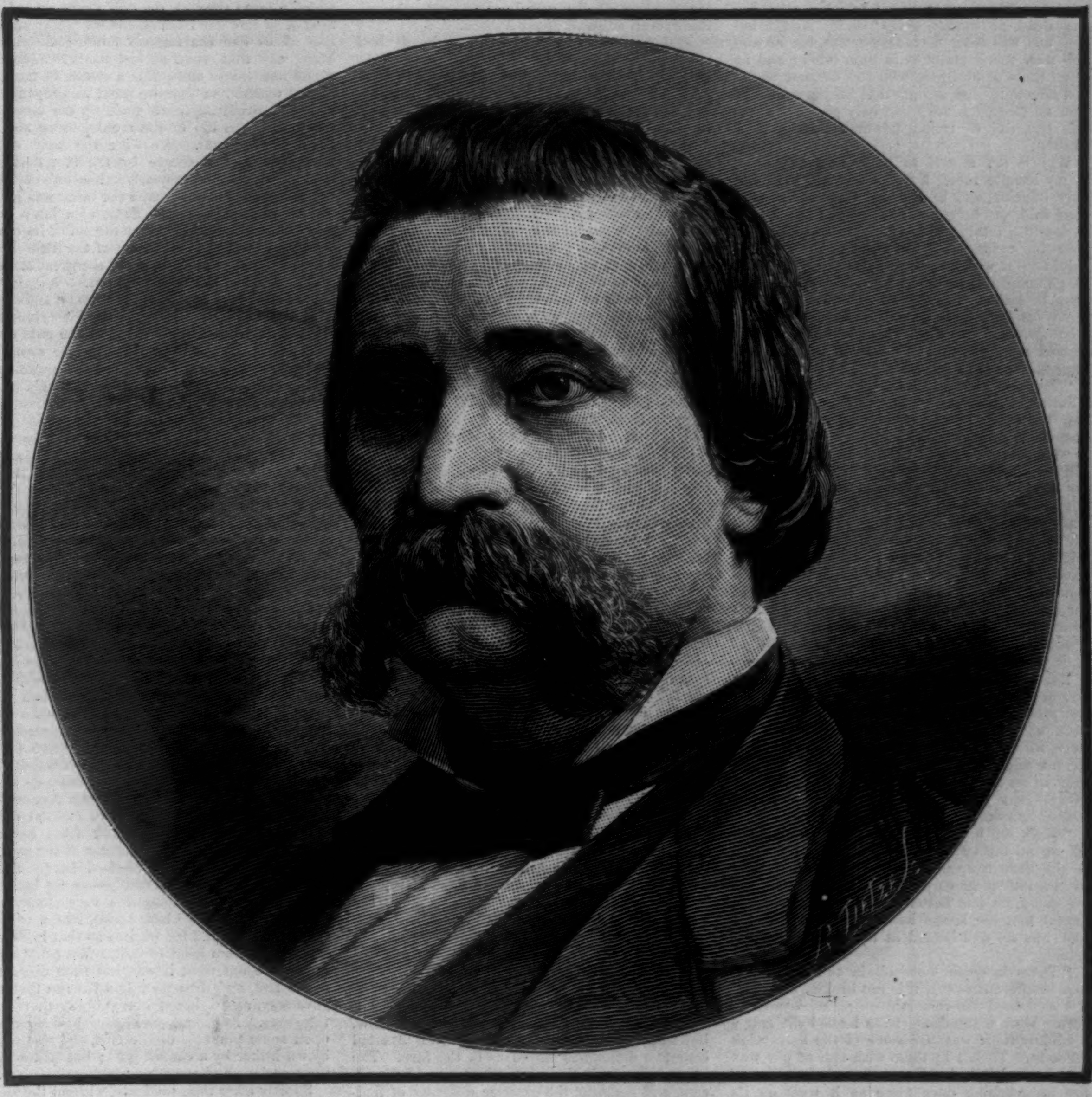
SAN ANTONIO, TEXAS.—Drawn by Harry Fenn from Photographs.—[See Page 11.]

GENERAL LOGAN.

John Alexander Logan died at his home in Washington, on Sunday, December 26, of congestion of the brain following an attack of rheumatism. For the forty-eight hours before his death he had lain in an almost unconscious stupor, and had apparenty suffered no pain. On the 9th of next February he would have completed his sixty-first year.

General **Logan** was born in Jackson County, Illinois, his father being a physician of Irish birth, and his mother a native of Tennessee. He enlisted as a private in the First Illinois Regiment for the Mexican war, afterward becoming First Lieutenant. In 1849 he made his entry into politics as a candidate for the Clerkship of Jackson County, to which he was elected. In 1852 he was graduated at the Louisville University and admitted to the bar. In 1852, 1853, 1856, and 1857 he was chosen to the State Legislature as a Democrat, and from 1853 to 1857 served as Prosecuting Attorney. In 1854 he was elected to Congress, and re-elected in 1860, resigning to enter the army, being appointed Colonel of the Thirty-first Illinois Volunteers in September, 1861. His rise in rank was rapid, and was gallantly earned. He won the single star of a Brigadier at Fort Donelson, where he was wounded. In the autumn of 1862 he was made a Major-General. In the Vicksburg campaign he commanded a division, from which, in October, 1863, he was transferred to the command of the Fifteenth Corps, which he held until the death of **McPherson**. In May, 1865, he succeeded General **Howard** in the command of the Army of the Tennessee, and resigned in August, with the reputation of being one of the most distinguished, if not quite the most distinguished of the soldiers of the war who had entered the Union army from civil life.

After the war General **Logan** was elected to the House of Representatives, and in 1871 was chosen to the Senate, re-elected in 1879, and again in 1885. As the Republican candidate for the Vice-Presidency in 1884 he came conspicuously before the country, and at the time of his death was one of the most prominent candidates for the Republican nomination to the Presidency in 1888.



THE HON. JOHN A. LOGAN.—Photographed by C. M. Bell.

SHE:*

A History of Adventure.

By H. RIDER HAGGARD,

Author of "King Solomon's Mines," "Jess," etc.

XXVI.

WHAT WE SAW.

Then came a few moments' pause, during which Ayesha seemed to be gathering up her strength for the fiery trial, while we clung to each other, and waited in utter silence.

At last from far, far away came the first murmur of sound, that grew and grew till it begun to crash and bellow in the distance. As she heard it, Ayesha swiftly threw off her gauzy wrapping, loosened the golden snake from her kirtle, and then, shaking her lovely hair about her like a garment, beneath its cover slipped the kirtle off, and replaced the snaky belt around her and outside the masses of falling hair. There she stood before us as Eve might have stood before Adam, clad in nothing but her abundant locks, held round her by her golden band; and no words of mine can tell how sweet she looked—and yet how divine. Nearer and nearer came the thunder wheels of fire, and as they came she pushed one ivory arm through the dark masses of her hair and flung it round Leo's neck.

"Oh, my love, my love," she murmured, "wilt thou ever know how I have loved thee!" and she kissed him on the forehead, and then went and stood in the pathway of the flame of Life.

There was, I remember, to my mind something very touching about the words and that embrace upon the forehead. It was like a mother's kiss, and seemed to convey a benediction with it.

On came the crashing, rolling noise, and the sound thereof was as though a forest were being swept flat by a mighty wind, and then tossed up by it like so much grass, and thundered down a mountian-side. Nearer and nearer it came; now flashes of light, forerunners of the revolving pillar of flame, were passing like arrows through the rosy air; and now the edge of the pillar itself appeared. Ayesha turned toward it, and stretched out her arms to greet it. On it came, very slowly, and lapped her round with flame. I saw the fire run up her form. I saw her lift it with both her hands as though it were water, and pour it over her head. I even saw her open her mouth and draw it down into her lungs, and a dread and wonderful sight it was.

Then she paused, and stretched out her arms, and stood there quite still, with a heavenly smile upon her face, as though she were the very Spirit of the Flame.

The mysterious fire played up and down her dark and rolling locks, twining and twisting itself through and around them like threads of golden lace; it gleamed upon her ivory breast and shoulder, from which the hair had slipped aside; it slid along her pillared throat and delicate features, and seemed to find a home in the glorious eyes that shone and shone more brightly even than the spiritual essence.

Oh, how beautiful she looked there in the flame? No angel out of heaven could have worn a greater loveliness. Even now my heart faints before the recollection of it, as she stood and smiled at our awed faces, and I would give half my remaining time upon this earth to see her once like that again.

But suddenly—more suddenly than I can describe—a kind of change came over her face, a change which I could not define or explain on paper, but none the less a change. The smile vanished, and in its place there came a dry, hard look; the rounded face seemed to grow pinched, as though some great anxiety were leaving its impress upon it. The glorious eyes, too, lost their light, and, as I thought, the form its perfect shape and erectness.

I rubbed my eyes, thinking that I was the victim of some hallucination, or that the refraction from the intense light produced an optical delusion; and, as I did so, the flaming pillar slowly twisted and thundered off whithersoever it passes to in the bowels of the great earth, leaving Ayesha standing where it had been.

As soon as it was gone, she stepped forward to Leo's side—it seemed to me that there was no spring in her step—and stretched out her hand to lay it on his shoulder. I gazed at her arm. Where was its wonderful roundness and beauty? It was getting thin and angular. And her face—by Heaven!—*her face was growing old before my eyes!* I suppose that Leo saw it also; certainly he recoiled a step or two.

"What is it, my Kallikrates?" she said, and her voice—what was the matter with those deep and thrilling notes? They were quite high and cracked.

"Why, what is it—what is it?" she said, confusedly. "I feel dazed. Surely the quality of the fire hath not altered. Can the principle of Life alter? Tell me, Kallikrates, is there aught wrong with my eyes? I see not clear," and she put her hand to her head and touched her hair—and oh, *horror of horrors!*—it all fell off upon the floor, leaving her utterly bald.

"Oh, *look! look! look!*" shrieked Job, in a shrill falsetto of terror, his eyes nearly dropping out of his head, and foam upon his lips. "*Look! look! look!* she's shrivelling up! she's turning into a monkey!" and down he fell upon the floor, foaming and gnashing in a fit.

True enough—I faint even as I write it in the living presence of that terrible recollection—she *was* shrivelling up; the golden snake that had encircled her gracious form slipped over her hips and fell upon the ground; smaller and smaller she grew; her skin changed color, and in place of the perfect whiteness of its lustre it turned dirty brown and yellow, like an old piece of withered parchment. She felt at her bald head: the delicate hand was nothing but a claw now, a human talon, like that of a badly preserved Egyptian mummy, and then she seemed to realize what kind of change was passing over her, and she shrieked—ah, she shrieked!—she rolled upon the floor and shrieked!

Smaller she grew, and smaller yet, till she was no larger than a she baboon. Now the skin was puckered into a million wrinkles, and on the shapeless face was the stamp of unutterable age. I never saw anything like it; nobody ever saw anything like the frightful age that was graven on that fearful countenance, no bigger now than that of a two-months' child, though the skull remained the same size, or nearly so; and let all men pray to God they never may, if they wish to keep their reason.

At last she lay still, or only feebly moving. She who but two minutes before had gazed upon us the loveliest, noblest, most splendid woman the world had ever seen, lay still before us, near the masses of her own dark hair, no larger than a big monkey, and hideous—ah, too hideous for words. And yet, think of this—at that very moment I thought of it—it was the same woman!

She was dying; we saw it, and thanked God—for while she lived she could feel, and what must she have felt? She raised herself upon her bony hands, and blindly gazed around her, swaying her head slowly from side to side as a tortoise does. She could not see, for her whitish eyes were covered with a horny film. Oh, the horrible pathos of the sight! But she could still speak.

"Kallikrates," she said, in husky, trembling notes. "Forget me not, Kallikrates. Have pity on my shame; I shall come again, and shall once more be beautiful; I swear it—it is true! *Oh—h—h—!*" and she fell upon her face and was still.

On the very spot where twenty centuries before she had slain the old Kallikrates, she herself fell down and died.

Overcome with the extremity of horror, we too fell on the sandy floor of that dread place, and swooned away.

I know not how long we lay thus. Many hours, I suppose. When at last I opened my eyes, the other two were still outstretched upon the floor. The rosy light still beamed like a celestial dawn, and the thunder wheels of the Spirit of Life still rolled upon their accustomed track, for as I awoke the great pillar was passing away. There, too, lay the hideous little monkey frame, covered with crinkled yellow parchment, that once had been the glorious *She*. Alas! it was no hideous dream—it was an awful and unparalleled fact!

What had happened to bring this shocking change about? Had the nature of the life-giving Fire changed? Did it perhaps from time to time send forth an essence of Death instead of an essence of Life? Or was it that the frame once charged with its marvellous virtue could bear no more, so that were the process repeated—it mattered not at what lapse of time—the two impregnations neutralized each other, and left the body on which they acted as it was before it ever came into contact with the very Essence of Life? This, and this alone, would account for the sudden and terrible aging of Ayesha, as the whole length of her two thousand years took effect upon her. I have not the slightest doubt myself but that the frame now lying before me was just what the frame of a woman would be if by any extraordinary means life could be preserved in her till she at length died at the age of twenty-two centuries.

But who can tell what had happened? There was the fact. Often since that awful hour I have reflected that it required no great stretch of imagination to see the finger of Providence in the matter. Ayesha locked up in her living tomb, waiting from age to age for the coming of her lover, worked but a small change in the order of the World. But Ayesha, strong and happy in her love, clothed in immortal youth and godlike beauty, and the wisdom of the centuries, would have revolutionized society, and even perchance have changed the destiny of Mankind. Thus she opposed herself against the eternal Law, and, strong though she was, by it was swept back to nothingness, swept back with shame and hideous mockery.

For some minutes I lay faintly turning these terrors over in my mind, while my physical strength came back to me, which it soon did in that buoyant atmosphere. Then I bethought me of the others, and staggered to my feet to see if I could arouse them. But first I took up Ayesha's kirtle and the gauzy scarf with which she had been wont to hide her dazzling loveliness from the eyes of men, and, averting my head so that I might not look upon it, covered up that dreadful relic of the glorious dead, that shocking epitome of human beauty and human life. I did this hurriedly, fearing lest Leo should recover, and see it again.

Then, stepping over the perfumed masses of dark hair that lay upon the sand, I stooped down by Job, who was lying upon his face, and turned him over. As I did so his arm fell back in a way that I did not like, and which sent a chill through me, and I glanced sharply at him. One look was enough. Our old and faithful servant was dead. His nerves, already shattered by all he had seen and undergone, had utterly broken down beneath this last dire sight, and he had died of terror, or in a fit brought on by terror. One had only to look at his face to see it.

It was another blow; but perhaps it may help people to understand how overwhelmingly awful was the experience through which we had passed—we did not feel it much at the time. It seemed quite natural that the poor old fellow should be dead. When Leo came to himself, which he did with a groan and trembling of the limbs about ten minutes afterward, and I told him that Job was dead, he merely said, "Oh!" And, mind you, this was from no heartlessness, for he and Job were much attached to each other; and he often talks of him now with the deepest regret and affection. It was only that his nerves would bear no more. A harp can only give out a certain quantity of sound, however heavily it is smitten.

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* Begun in Harper's Weekly No. 1554.

Well, I set myself to recovering Leo, who, to my infinite relief, I found was not dead, but only fainting, and in the end I succeeded, as I have said, and he sat up; and then I saw another dreadful thing. When we entered that awful place his curling hair had been of the ruddiest gold, now it was turning gray, and by the time we gained the outer air it was snow-white. Besides, he looked twenty years older.

"What is to be done, old fellow?" he said, in a hollow, dead sort of voice, when his mind had cleared a little, and a recollection of what had happened forced itself upon it.

"Try and get out, I suppose," I answered; "that is, unless you would like to go in there," and I pointed to the column of fire that was once more rolling by.

"I would go in if I were sure that it would kill me," he said, with a little laugh. "It was my cursed hesitation that did this. If I had not been afraid, she might never have tried to show me the road. But I am not sure. The fire might have the opposite effect upon me. It might make me immortal; and, old fellow, I have not the patience to wait a couple of thousand years for her to come back again, as she did for me. I had rather die when my hour comes—and I should fancy that it isn't far off either—and go my ways to look for her. Do you go in, if you like."

But I merely shook my head, my excitement was as dead as ditch-water, and my distaste for the prolongation of my mortal span had come back upon me more strongly than ever. Besides, we neither of us knew what the effects of the fire might be. The result upon *She* had not been of an encouraging nature, and of the exact causes that produced that result we were, of course, ignorant.

"Well, my boy," I said, "we can't stop here till we go the way of those two," and I pointed to the little heap under the white garment and to the stiffening corpse of poor Job. "If we are going, we had better go. But, by-the-way, I expect that the lamps have burnt out;" and I took one up and looked at it, and sure enough it had.

"There is some more oil in the vase," said Leo, indifferently—"if it is not broken, at least."

I examined the vessel in question; it was intact. With a trembling hand I filled the lamps—luckily there was still some of the linen wick unburnt. Then I lit them with one of our wax matches. While I did so we heard the pillar of fire approaching once more as it went on its never-ending journey, if, indeed, it was the same pillar that passed and repassed in a circle.

"Let's see it come once more," said Leo; "we shall never look upon its like again in this world."

It seemed a bit of idle curiosity, but somehow I shared it, and so we waited till, turning slowly round upon its own axis, it had flamed and thundered by; and I remember wondering for how many thousands of years this same phenomenon had been taking place in the bowels of the earth, and for how many more thousands it would continue to take place. I wondered also if any mortal eyes would ever again mark its passage, or any mortal ears be thrilled and fascinated by the swelling volume of its majestic sound. I do not think that they will. I believe that we are the last human beings who will ever see that unearthly sight. Presently it had gone, and we too turned to go.

But before we did so we each took Job's cold hand in ours and shook it. It was a rather ghastly ceremony, but it was the only means in our power of showing our respect to the faithful dead and of celebrating his obsequies. The heap beneath the white garment we did not uncover. We had no wish to look upon that terrible sight again. But we went to the pile of rippling hair that had fallen from her in the agony of the hideous change which was worse than a thousand natural deaths, and each of us drew from it a shining lock, and these locks we still have, the sole memento that is left to us of Ayesha as we knew her in the fulness of her grace and glory. Leo pressed the perfumed hair to his lips.

"She called to me not to forget her," he said, hoarsely—"and swore that we should meet again. By Heaven! I never will forget her Here I swear that, if we live to get out of this, I will not for all my days have anything to say to another living woman, and that wherever I go I will wait for her as faithfully as she waited for me."

"Yes," I thought to myself, "if she comes back beautiful as we knew her. But supposing she came back like that!"*

Well, and then we went. We went, and left those two in the presence of the very well and spring of Life, but gathered to the cold company of Death. How lonely they looked as they lay there, and how ill-assorted! That little heap had been for two thousand years the wisest, loveliest, proudest creature—I can hardly call her woman—in the whole universe. She had been wicked too, in her way; but, alas! such is the frailty of the human heart, her wickedness had not detracted from her charm. Indeed, I am by no means certain that it did not add to it. It was, after all, of a grand order; there was nothing mean or small about Ayesha.

And poor Job, too! His presentiment had come true, and there was an end of him. Well, he had a strange burial-place—no Norfolk hind ever had a stranger, or ever will; and it is something to lie in the same sepulchre with the poor remains of the imperial *She*.

We looked our last upon them and the indescribable rosy glow in which they lay, and then with hearts far too heavy for words we left them, and crept thence broken-down men—so broken-down that we even renounced the chance of practically immortal life, because all that made life valuable had gone from us, and we knew even then that to prolong our days indefinitely would only be to prolong our sufferings. For we felt—yes, both of us—that having once looked Ayesha in the eyes, we could not forget her for ever and ever while memory and identity remained. We both loved her now and for always; she was stamped and carven on our hearts, and no other woman could ever raze that splendid die. And I—there lies the sting—I had and have no right to think thus of her. As she told me, I was naught to her, and never shall be through the unfathomed depths of Time, unless, indeed, conditions alter, and a day comes at last when two men may love one woman, and all three be happy in the fact. It is the only hope of my broken-heartedness, and a rather faint one. Beyond it I have nothing. I have paid down this heavy price, all that I am worth here and hereafter, and that is my sole reward. With Leo it is different, and often and often I bitterly envy him his happy lot, for if *She* was right, and her wisdom and knowledge did not fail her at the last, which arguing from the precedent of her own case I think unlikely, he has some future to look forward to. But I have none; and yet—mark the folly and the weakness of the human heart, and let him who is wise learn wisdom from it—yet I would not have it otherwise. I mean that I am content to give what I have given and must always give, and take in payment those crumbs that fall from my mistress's table, the memory of a few kind words, the hope one day in the far undreamed future of a sweet smile or two of recognition, and a little show of thanks for my devotion to her—and Leo.

If that does not constitute true love, I do not know what does, and all I have to say is that it is a very bad state of mind for a man on the wrong side of middle age to fall into.

XXVII.

WE LEAP.

We passed through the caves without trouble, but when we came to the slope of the inverted cone two difficulties stared us in the face. The first of these was the laborious nature of the ascent, and the next the extreme difficulty of finding our way. Indeed, had it not been for the mental notes that I had fortunately taken of the shape of various rocks, etc., I am sure that we never should have managed it at all, but have wandered about in the dreadful womb of the volcano—for I suppose it must once have been something of the sort—until we died of exhaustion and despair. As it was, we went wrong several times, and once nearly fell into a huge crack or crevasse. It was terrible work creeping about in the dense gloom and awful stillness from bowlder to bowlder, and examining it by the feeble light of the lamps to see if I could recognize its shape. We rarely spoke, our hearts were too heavy for speech, we simply stumbled about, falling sometimes and cutting ourselves, in a rather dogged sort of way. The fact was that our spirits were utterly crushed, and we did not greatly care what happened to us. Only we felt bound to try and save our lives whilst we could, and, indeed, a natural instinct prompted us to it. So for some three or four hours, I should think—I cannot tell exactly how long, for we had no watch left that would go—we blundered on. During the last two hours we were completely lost, and I began to fear that we had got in the funnel of some subsidiary cone, when at last I suddenly recognized a very large rock which we had passed in descending but a little way from the top. It is a marvel that I should have recognized it, and, indeed, we had already passed it going at right angles to the proper path, when something about it struck me, and I turned back and examined it in an idle sort of way, and, as it happened, this proved our salvation.

After this we gained the rocky natural stair without much further trouble, and in due course found ourselves back in the little chamber where the benighted Noot had lived and died.

But now a fresh terror stared us in the face. It may be remembered that, owing to poor Job's fear and awkwardness, the plank upon which we had crossed from the huge spur to the rocking-stone had been whirled off into the gulf below.

How were we to cross without the plank?

There was only one answer—we must try and *jump* it, or else stop where we were till we starved. The distance in itself was not so very great—between eleven and twelve feet, I should think—and I have seen Leo jump over nineteen when he was a young fellow at college; but then, think of the conditions. Two weary, worn-out men, one of them the wrong side of forty, a rocking stone to take off from, a trembling point of rock some few feet across to land on, and a bottomless gulf to be cleared in a raging gale. It was bad enough, God knows, but when I pointed out these things to Leo, he put the whole matter in a nutshell by replying that, merciless as the choice was, we must choose between the certainty of a lingering death in the chamber and the risk of a swift one in the air. Of course there was no arguing against this, but one thing was clear, we could not attempt that leap in the dark; the only thing to do was to wait for the ray of light which pierced through the gulf at sunset. How near to or how far from sunset we might be, neither of us had the faintest notion; all we did know was that when at last the light came it would not endure more than a couple of minutes at the outside, so that we must be prepared to meet it. Accordingly we made up our minds to creep on to the top of the rocking-stone and lie there in readiness. We were the more easily reconciled to this course by the fact that our lamps were once more nearly exhausted—indeed, one had gone out bodily, and the other was jumping up and down, as the flame of a lamp does when the oil is done. So by the aid of its dying light we hastened to crawl out of the little chamber and clamber up the side of the great stone.

As we did so the light went out.

The difference in our position was a sufficiently remarkable one. Below, in the little chamber, we had only heard the roaring of the gale overhead; here, lying on our faces on the swinging stone, we were exposed to its full force and fury, as the great draught drew first from this direction and then from that, howling against the mighty precipice and through the rocky cliffs like ten thousand despairing souls. We lay there hour after hour in terror and misery of mind so deep that I will not attempt to describe it, and listened to the wild storm-voices of that Tartarus as, set to the deep undertone of the spur opposite, against which the wind hummed like some awful harp, they called to each other from precipice to precipice. No nightmare dreamed by man, no wild invention of the romancer, can ever equal the living horror of that place and the weird crying of those voices of the night as we lay, like shipwrecked mariners on a raft, and tossed on a black, unfathomed wilderness of air. Fortunately the temperature was not a low one—indeed, the wind was warm, or we should have perished. Well, we lay and listened, and while we still were stretched out upon the rock a thing happened that was so curious and suggestive in itself, though doubtless it was a mere coincidence, that, if anything, it added to rather than deducted from the burden on our nerves.

It will be remembered that when Ayesha was standing on the spur, before we crossed to the stone, the wind tore her cloak from her and whirled it away into the darkness of the gulf, we could not see whither. Well—I hardly like to tell the story, it is so strange—as we lay there upon the rocking-stone, this very cloak came floating out of the black space, like a memory from the dead, and fell on Leo so that it covered him nearly from head to foot. We could not at first make out what it was, but soon discovered by its feel, and then poor Leo for the first time gave way, and I heard him sobbing there upon the stone. No doubt the cloak had been caught upon some pinnacle of the cliff, and was thence blown hither by a chance gust; but still it was a most curious and touching incident.

Shortly after this, suddenly, without the slightest previous warning, the great red knife of light came stabbing the darkness through and through, struck the swaying stone on which we lay, and rested its sharp point upon the spur opposite.

"Now for it," said Leo—"now or never."

We rose and stretched ourselves, and looked at the cloud-wreaths, stained the color of blood by that red ray, as they tore through the sickening depths beneath, and then at the empty space between the swaying stone and the quivering rock, and in our hearts despaired and prepared for death. Surely we could not clear it, desperate though we were.

"Who is to go first?" said I.

"Do you, old fellow," answered Leo. "I will sit upon the other side of the stone to steady it. You must take as much run as you can, and jump high; and God have mercy on us, say I."

I acquiesced with a nod, and then I did a thing I had never done since Leo was a little boy. I turned and put my arm round him, and kissed him on the forehead. It sounds rather French, but as a fact I was taking my last farewell of a man whom I could not have loved more if he had been my own son twice over.

"Good-by, my boy," I said; "I hope that we shall meet again, wherever it is that we go to."

The fact was I did not expect to live another two minutes.

Next I retreated to the far side of the rock, and waited till one of the chopping gusts of wind got behind me, and then commending my soul to God, I ran the length of the huge stone, some three or four and thirty feet, and sprang wildly out into the dizzy air. Oh! the sickening terrors that I felt as I launched myself at that little point of rock, and the horrible sense of despair that shot through my brain as I realized that I had *jumped short!* But so it was; my feet never touched the point; they went down into space, only my hands and body came in contact with it. I gripped at it with a yell, but one hand slipped, and I swung right round, holding by the other, so that I faced the stone from which I had sprung. Wildly I stretched up with my left hand, and this time managed to grasp a knob of rock, and there I hung in the fierce red light, with thousands of feet of empty air beneath me. My hands were holding to either side of the under part of the spur, so that its point was touching my head. Therefore even if I could have found the strength I could not pull myself up. The most that I could do would be to hang for about a minute, and then drop down, down, into the bottomless pit. If any man can imagine a more hideous position, let him speak. All I know is that the torture of that half-minute nearly turned my brain. I heard Leo give a cry, and then suddenly saw him in mid-air springing up and out like a chamois. It was a splendid leap that he took under the influence of his terror and despair, clearing the horrible gulf as though it were nothing, and landing well on to the rocky point. He threw himself upon his face, to prevent his pitching off it into the depths. I felt the spur above me shake beneath the shock of his impact, and as it did so I saw the huge rocking-stone, that had been violently depressed by him as he sprang, fly back when relieved of his weight, till, for the first time during all these centuries, it got beyond its balance, and fell with a most awful crash right into the rocky chamber which had once served the philosopher Noot for a hermitage, as I have no doubt forever hermetically sealing the passage that leads to the Place of Life with some hundreds of tons of rock.

All this happened in a second, and, curiously enough, notwithstanding my terrible position, I noted it all involuntarily, as it were. I even remember thinking that no human being would go down that dread path again.

Next instant I felt Leo seize me by the right wrist with both hands. By lying flat upon his stomach on the point of rock he could just reach me.

"You must let go and swing yourself clear," he said, in a calm and collected voice, "and then I will try and pull you up, or we will both go together. Are you ready?"

By way of answer I let go, first with my left hand and then with the right, and swayed out as a consequence clear of the overshadowing rock, my weight hanging upon Leo's arms. It was a dreadful moment. He was a very powerful man, I knew, but would his strength be equal to lifting me up till I could get a hold on the top of the spur, when owing to his position he had so little purchase?

For a few seconds I swung to and fro, while he gathered himself for the effort, and then I heard his sinews cracking above me, and felt myself lifted up as though I were a little child, till I got my left arm round the rock, and my chest was resting on it. The rest was easy; in two or three more seconds I was up, and we were lying panting side by side, trembling like leaves, and with the cold perspiration of terror pouring from our skins.

And then, as before, the light went out like a lamp.

For some half-hour we lay thus without speaking a word, and then at length began to creep along the great spur as best we might in the dense gloom. As we got toward the face of the cliff, however, from which the spur sprang out like a spike from a wall, the light increased, though only a very little, for it was night overhead. After that the gusts of wind decreased, and we got along rather better, and at last reached the mouth of the first cave or tunnel. But now a fresh trouble stared us in the face: our oil was gone, and the lamps were, no doubt, crushed to powder beneath the fallen rocking-stone. We were even without a drop of water to stay our thirst, for we had drunk the last in the chamber of Noot. How were we to see to make our way through this last bowlder-strewn tunnel?

Clearly all that we could do was to trust to our sense of feeling, and attempt the passage in the dark; so in we crept, fearing that if we delayed to do so our exhaustion would overcome us, and we should probably lie down and die where we were.

Oh, the horrors of that last tunnel! The place was strewn with rocks, and we fell over them, and knocked ourselves up against them till we were bleeding from a score of wounds. Our only guide was the side of the cavern, which we kept touching, and so bewildered did we grow in the darkness that we were several times seized with the terrifying thought that we had turned and were travelling the wrong way. On we went, feebly, and still more feebly, for hour after hour, stopping every few minutes to rest, for our strength was spent. Once we fell asleep, and, I think, must have slept for some hours, for, when we woke, our limbs were quite stiff, and the blood from our blows and scratches had caked, and was hard and dry upon our skin. Then we dragged ourselves on again, till at last, when despair was entering into our hearts, we once more beheld the light of the day, and found ourselves outside the tunnel, in the rocky fold on the outer surface of the cliff that, it will be remembered, led into it.

It was early morning—that we could tell by the feel of the sweet air and the look of the blessed sky, which we had never hoped to see again. It had, so near as we knew, been an hour after sunset when we entered the tunnel, so it followed that it had taken us the entire night to crawl through that dreadful place.

"One more effort, Leo," I gasped, "and we shall reach the slope where Billali is, if he hasn't gone. Come, don't give way," for he had cast himself upon his face. He got up, and, leaning on each other, we got down that fifty feet or so of cliff—somehow. I have not the least notion how. I only remember that we found ourselves lying in a heap at the bottom, and then once more began to drag ourselves along on our hands and knees toward the grove where *She* had told Billali to wait her re-arrival, for we could not walk another foot. We had not gone fifty yards in this fashion when suddenly one of the mutes emerged from some trees on our left, through which, I presume, he had been taking a morning stroll, and came running up to see what sort of strange animals we were. He stared, and stared, and then held up his hands in horror, and nearly fell to the ground. Next, he started off as hard as he could for the grove, some two hundred yards away. No wonder that he was horrified at our appearance, for we must have been a shocking sight. To begin, Leo with his golden curls turned a snowy white, his clothes nearly rent from his body, his worn face and his hands a mass of bruises, cuts, and blood—incrusted filth—was a sufficiently alarming spectacle, as he painfully dragged himself along the ground, and I have no doubt that I was little better. I know that two days afterward when I looked at my face in some water I scarcely knew myself. I have never been famous for beauty, but there was something besides ugliness stamped upon my features that I have never got rid of until this day, something resembling that wild look with which a startled person wakes from deep sleep more than anything that I can think of. And really it is not to be wondered at. What I do wonder at is that we escaped at all with our reason.

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* What a terrifying reflection it is, by-the-way, that nearly all our deep love for women who are not our kindred depends—at any rate, in the first instance—upon their personal appearance. If we lost them, and found them again dreadful to look on, though otherwise they were the very same, should we still love them?—L. H. H.

Presently to my intense relief I saw old Billali hurrying toward us, and even then I could scarcely help smiling at the expression of consternation on his dignified countenance.

"Oh, my Baboon! my Baboon!" he cried, "my dear son, is it indeed thee and the Lion? Why, his mane that was as ripe as corn is white like the snow. Whence come ye? and where is the Pig, and where too *She-who-must-be-obeyed?*"

"Dead, both dead," I answered; "but ask not questions; help us, and give us food and water, or we too shall die before thine eyes. Seest thou not that our tongues are black for want of water? How can we talk, then?"

"Dead!" he gasped—"impossible! *She* who never dies—dead, how can it be?" and then perceiving, I think, that his face was being watched by the mutes who had come running up, he checked himself, and motioned to them to carry us to the camp, which they did.

Fortunately when we arrived some broth was boiling on the fire, and with this Billali fed us, for we were too weak to feed ourselves, thereby I firmly believe saving us from death by exhaustion. Then he bade the mutes wash the blood and grime from us with wet cloths, and after that we were laid down upon piles of aromatic grass, and instantly fell into the dead sleep of absolute exhaustion of mind and body.

XXVIII.

OVER THE MOUNTAIN.

THE next thing I recollect is a feeling of the most dreadful stiffness, and a sort of vague idea passing through my half-awakened brain that I was a carpet that had just been beaten. I opened my eyes, and the first thing they fell on was the venerable countenance of our old friend Billali, who was seated by the side of the improvised bed upon which I was sleeping, and thoughtfully stroking his long beard. The sight of him at once brought back to my mind a recollection of all that we had recently passed through, which was accentuated by the vision of poor Leo lying opposite to me, his face knocked almost to a jelly, and his beautiful crowd of curls turned from yellow to white,* and I shut my eyes again and groaned.

"Thou hast slept long, my Baboon," said old Billali.

"How long, my father?" I asked.

"A round of the sun and a round of the moon, a day and a night, hast thou slept, and the Lion also. See, he sleepeth yet."

"Blessed is sleep," I answered, "for it swallows up recollection."

"Tell me," he said, "what hath befallen ye, and what is this strange story of the death of Her who dieth not. Bethink thee, my son; if this be true, then is thy danger and the danger of the Lion very great—nay, almost is the pot red wherewith ye shall be potted, and the stomachs of those who shall eat ye are already hungry for the feast. Knowest thou not that these Amahagger, my children, these dwellers in the caves, hate ye? They hate ye as strangers, they hate ye more because of their brethren whom *She* put to the torture for ye. Assuredly, if once they learn that there is naught to fear from Hiya, from the terrible *She-who-must-be-obeyed*, they will slay ye by the pot. But let me hear thy tale, my poor Baboon."

Thus adjured, I set to work and told him—not everything, indeed, for I did not think it desirable to do so, but sufficient for my purpose, which was to make him understand that *She* was really no more, having fallen into some fire, and, as I put it—for the real thing would have been incomprehensible to him—been burned up. I also told him some of the horrors we had undergone in effecting our escape, and these produced a great impression on him. But I clearly saw that he did not believe in the report of Ayesha's death. He believed, indeed, that we thought that she was dead, but his explanation was that it had suited her to disappear for a while. Once, he said, in his father's time, she had done so for ten years, and there was a tradition in the country that many centuries back no one had seen her for a whole generation, when she suddenly reappeared, and destroyed a woman who had assumed the position of Queen. I said nothing to this, but only shook my head sadly. Alas! I knew too well that Ayesha would appear no more, at any rate that Billali would never see her.

"And now," concluded Billali, "what wouldst thou do, my Baboon?"

"Nay," I said, "I know not, my father. Can we not escape from this country?"

He shook his head.

"It is very difficult. By Kôr ye cannot pass, for ye would be seen, and as soon as those fierce ones found that ye were alone, well," and he smiled significantly, and made a movement as though he were placing a hat on his head. "But there is a way over the cliff whereof I once spake to ye, where they drive the cattle out to pasture. Then beyond the pastures are three days' journey through the marshes, and after that I know not, but I have heard that seven days' journey from thence is a mighty river, which floweth to the black water. If ye could come thither, perchance ye might escape; but how can ye come thither?"

"Billali," I said, "once, thou knowest, I did save thy life. Now pay back the debt, my father, and save me mine and my friend's, the Lion's. It shall be a pleasant thing for thee to think of when thine hour comes, and something to set in the scale against the evil doing of thy days, if perchance thou hast done any evil. Also, if thou be right, and if *She* doth but hide herself, surely when she comes again she shall reward thee."

"My son the Baboon," answered the old man, "think not that I have an ungrateful heart. Well do I remember how thou didst rescue me when those dogs stood by to see me drown. Measure for measure will I give thee, and if thou canst be saved, surely I will save thee. Listen: By dawn to-morrow be prepared, for litters shall be here to bear ye away across the mountains, and through the marshes beyond. This will I do, saying that it is the word of *She* that it be done, and he who obeyeth not the word of *She*, food is he for the hyenas. Then, when ye have crossed the marshes, ye must strike with your own hand, so that perchance if good fortune go with ye, ye may live to come to that black water whereof ye told me. And now, see, the Lion wakes, and ye must eat the food I have made ready for ye."

Leo's condition when once he was fairly aroused proved not to be so bad as might have been expected from his appearance, and we both of us managed to eat a hearty meal, which, indeed, we needed sadly enough. After this we limped down to the spring and bathed, and then came back and slept again till evening, when we once more ate enough for five. Billali was away all that day, no doubt making arrangements about litters and bearers, for we were awakened in the middle of the night by the arrival of a considerable number of men in the little camp.

At dawn the old man himself appeared, and told us that he had by using *She's* dreaded name, though with some difficulty, succeeded in getting the necessary men and two guides to conduct us across the swamps, and that he urged us to start at once, at the same time announcing his intention of accompanying us, so as to protect us against treachery. I was much touched by this act of kindness on the part of that wily old barbarian toward two utterly defenceless strangers. A three—or in his case, for he would have to return, six—days' journey through those deadly swamps was no light undertaking for a man of his age, but he consented to it cheerfully in order to promote our safety. It shows that even among those dreadful Amahagger—who are certainly with their gloom and their devilish and ferocious rites by far the most terrible savages that I ever heard of—there are people with kindly hearts. Of course self-interest may have had something to do with it. He may have thought that *She* would suddenly reappear and demand an account of us at his hands; but still, allowing for all deductions, it was a great deal more than we could expect under the circumstances, and I can only say that I shall for as long as I live cherish a most affectionate remembrance of my nominal parent, old Billali.

Accordingly, after swallowing some food, we started in the litters, feeling, so far as our bodies went, wonderfully like our old selves after our long rest and sleep. I must leave the condition of our minds to the imagination.

Then came a terrible pull up the cliff. Sometimes the ascent was natural, more often it was a zigzag roadway, cut, no doubt, in the first instance by the old inhabitants of Kôr. The Amahagger say they drive their spare cattle over it once a year to pasture outside; all I know is that those cattle must be uncommonly active on their feet. Of course the litters were useless here, so we had to walk.

By mid-day, however, we reached the great flat top of that mighty wall of rock, and grand enough the view was from it, with the plain of Kôr, in the centre of which we could clearly make out the pillared ruins of the Temple of Truth, to the one side, and the boundless and melancholy marsh on the other. This wall of rock, which had no doubt once formed the lip of the crater, was about a mile and a half thick, and still covered with clinkers. Nothing grew there, and the only things to relieve one's eyes were occasional pools of rain-water (for rain had lately fallen) wherever there was a little hollow. Over the flat crest of this mighty rampart we went, and then came the descent, which, if not so difficult a matter as the getting up, was still sufficiently breakneck, and took us till sunset. That night, however, we camped in safety upon the mighty slopes that rolled away to the marsh beneath.

On the following morning, about eleven o'clock, began our dreary journey across those awful seas of swamps which I have already described.

For three whole days, through stench and mire, and the all-prevailing flavor of fever, did our bearers struggle along, till at length we came to open rolling ground, quite uncultivated, and mostly treeless, but covered with game of all sorts, which lies beyond that most desolate, and without guides utterly impracticable, district. And here on the following morning we bade farewell, not without some regret, to old Billali, who stroked his white beard, and solemnly blessed us.

"Farewell, my son the Baboon," he said, "and farewell to thee too, O Lion. I can do no more to help ye. But if ever ye come to your own country, be advised, and venture no more into lands that ye know not, lest ye come back no more, but leave your white bones to mark the limit of your journeyings. Farewell once more; often shall I think of ye; nor wilt thou forget me, my Baboon, for though thy face is ugly thy heart is true." And then he turned and went, and with him went the tall and sullen-looking bearers; and that was the last that we saw of the Amahagger. We watched them winding away with the empty litters like a procession bearing dead men from a battle, till the mists from the marsh gathered round them and hid them; and then, left utterly desolate in the vast wilderness, we turned and gazed around us and at each other.

Three weeks or so before, four men had entered the marshes of Kôr, and now two of us were dead, and the other two had gone through adventures and experiences so strange and terrible that Death himself hath not a more fearful countenance. Three weeks—and only three weeks! Truly time should be measured by events, and not by the lapse of hours. It seemed like thirty years since we saw the last of our whale-boat.

"We must strike out for the Zambesi, Leo," I said, "but God knows if we shall ever get there."

Leo nodded. He had become very silent of late, and we started with nothing but the clothes we stood in, a compass, our revolvers and express rifles, and about two hundred rounds of ammunition; and so ended the history of our visit to the ruins of mighty Kôr.

As for the adventures that subsequently befell us, strange and varied as they were, I have, after deliberation, determined not to record them here. In these pages I have only tried to give a short and clear account of an occurrence which I believe to be unique, and this I have done, not with a view to immediate publication, but merely to put on paper while they are yet fresh in our memories the details of our journey and its result, which will, I believe, prove interesting to the world if ever we determine to make them public. This, as at present advised, we do not intend should be done during our joint lives.

For the rest, it is of no public interest, resembling as it does the experience of more than one Central African traveller. Suffice it to say that we did, after incredible hardships and privations, reach the Zambesi, which proved to be about a hundred and seventy miles south of where Billali left us. There we were for six months imprisoned by a savage tribe, who believed us to be supernatural beings, chiefly on account of Leo's youthful face and snow-white hair. From these people we ultimately escaped, and crossing the Zambesi, wandered off southward, where, when on the point of starvation, we were sufficiently fortunate to fall in with a half-caste Portuguese elephant hunter, who had followed a troop of elephants further inland than he had ever been before. This man treated us most hospitably, and ultimately through his assistance we, after innumerable sufferings and adventures, reached Delagoa Bay, more than eighteen months from the day when we emerged from the marshes of Kôr, and the very next day managed to catch one of the Donald Currie boats that run round the Cape to England. Our journey home was a prosperous one, and we set our foot on the quay at Southampton exactly two years from the date of our departure upon our wild and seemingly ridiculous quest. And I now write these last words with Leo leaning over my shoulder, in my old room in my college, the very same into which some two-and-twenty years ago my poor friend Vincey came stumbling on the memorable night of his death, bearing the iron chest with him.

Is Leo really a reincarnation of the ancient Kallikrates of whom the writer speaks? Or was Ayesha deceived by some extraordinary racial resemblance? The reader must form his own opinion on this as on many other matters. I have mine, which is that she made no such mistake.

And that is the end of this history, so far as it concerns science and the outside world. What its end will be as regards Leo and myself is more than I can guess at. But we feel that it is not reached yet. A story that began two thousand years ago may stretch a long way into the dim and distant future.

Often I sit alone at night, staring with the eyes of the mind into the blackness of unborn time, and wondering in what shape and form the drama will be finally developed, and where the scene of its last act will be laid. And when that final development ultimately occurs, as I have no doubt it must and will occur, in obedience to a fate that never swerves and a purpose that cannot be altered, what will be the part played therein by that Egyptian Amenartas, the Princess of the race of the Pharaoh Hakor, for the love of whom the ancient Kallikrates broke his vows to Isis, and, pursued by the inexorable vengeance of the outraged Goddess, fled down the coast of Libya to meet his doom at Kôr.

THE END.

HOSPITAL SATURDAY AND SUNDAY.

ON the Saturday and Sunday which fall nearest Christmas it has become the custom in New York to contribute to the support of the hospitals where patients receive free treatment, and these days have come to be known as "Hospital Saturday and Sunday." The association which has this work in hand represents twenty-four hospitals in the city. Some of these, such as the Home for Incurables, the New York Eye and Ear Infirmary, and the Orthopedic Hospital, are for the treatment of special classes of diseases, and others are for the treatment of all diseases. Some are under the immediate patronage of one religious sect, others of another, and some of none. In some the treatment is of one school of medicine; in others, of other schools. Some were founded by private benefactions; others are partly maintained by the churches. Some devote their efforts especially for the relief of the suffering of particular nationalities, as the Hospital of the French Benevolent Society. But they all have this in common—they alleviate suffering without asking questions, and without fees when the patient cannot pay; and no suffering men, women, or children of any nationality or of any creed, or of no creed, are turned away.

During the year just ended, 12,992 patients were treated in beds in these hospitals, nearly 10,000 of whom were free patients; and there were, besides these, 125,918 "dispensary" patients, who received medicine or treatment, but did not need to have beds in the hospitals. Nearly 140,000 sufferers, therefore, received the benefits of these institutions during the year, by far the greater part of whom received them free. The expenses of these hospitals during the same period were $633,595 35, and their income from invested funds was $126,499 08. The deficit of more than half a million dollars was made up by the subscriptions of the charitable, and a large part of it was the donations made on the last "Hospital Saturday and Sunday."

A certain part of the subscriptions for this practical and noble charity is taken up in those churches which give the collections of Hospital Sunday to this fund. Another part is got by systematized solicitation in several departments of mercantile life, and this year in part also by a committee of ladies, who receive contributions from the members of their own sex. The rest is gathered from the little contribution boxes which are placed, just before the holidays, at all the railway stations, the ferry-houses, the hotels, and at other places where men congregate.

The beneficent work done by this free hospital service in a great city is shown by the illustrations on another page, where sick children and the victims of accidents are followed from the homes of the poor or from the street to the convalescent wards in the hospitals. There is no other form that charity can take about which there is so little room for controversy, or excuse for hesitation. The physical suffering of the poor, whatever theories men may have about its causes, or whatever sweeping social remedies they may dispute about, is the painful fact that is always with us; and no person who ever does a charitable act and is able to contribute money to relieve suffering can find a more direct channel to do such a service. If a request accompanies any donation that it be applied to a specific purpose, it is always so applied. Otherwise the money collected is divided properly among the hospitals. The large amounts of money given and the large number of contributors every year show that, small as the total amount and the total number of contributors are in comparison with the wealth and the population of New York, the growth of organized charity has not lessened the benevolent impulses of men when a charity appeals to them which is so well managed, and which goes so directly to the alleviation of suffering. That Hospital Saturday and Sunday are regarded as "established" speaks praises for the efficacy of organized charity, and the largeness of these annual contributions that the impulse to relieve suffering overrides all creeds and sects and national distinctions.

This special annual collection for the support of the hospitals was at first regarded, and is yet regarded by some of the most liberal contributors to this fund, as only a temporary necessity; for they look to the time when the hospitals shall be endowed. More and more are endowed every year; but the demands made for such service as they render also increase, so that there will always be need of the aid of these contributions. Moreover, the custom of giving for the relief of physical suffering has become a part of the especial duties and privileges of the holidays, as the observance of Christmas has the more nearly approached a universally obligatory custom. Habit has added its force to the making of this contribution, and people give to this hospital fund who do not, and others who cannot, often listen to the appeals of other charities. The familiar contribution boxes which make their appearance everywhere in the city just before Christmas do not have an obtrusive appearance. On the contrary, they present the opportunity that every right-feeling person seeks at this season of relieving a case of suffering about the necessity or the benefit of which there is no room for controversy. Every dollar goes to make the pain in the world of poverty less.

TO ONE WHO DOUBTS.

BY MARGARET EYTINGE.

SUPPOSE you don't believe it,
This lovely, tender story
Of the Christ-Child born on Christmas Day,
While angels sang His glory.
Would you have the countless thousands
Who in their hearts have shrined it
Destroy the shrines, and, joined with you,
A pretty fable find it?

Think a moment of the kindness
That the thoughts of it awaken,
Prompting happy souls to seek and cheer
The lonely and forsaken;
Of the smiles it gives the children,
Of the love with which its greeting
Is spoken where'er Christian folks
On Christmas Day are meeting.

Think of the hope and courage
And faith by it relighted,
Of the blessings that through it are cast
On pathways long benighted;
And if you still can doubt it,
Can you say it has not given
To man the joy above all joys
That brings him nearest heaven?

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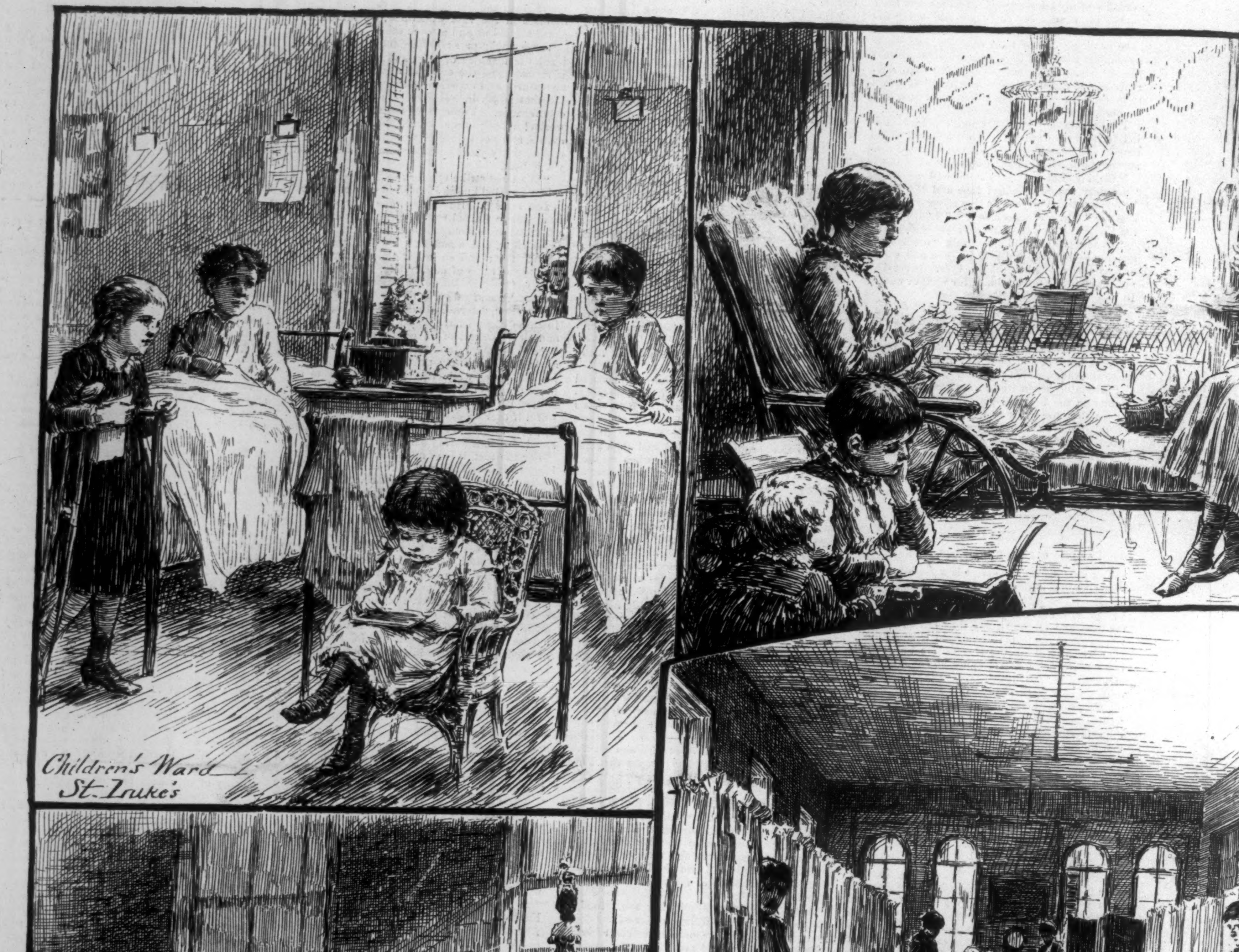
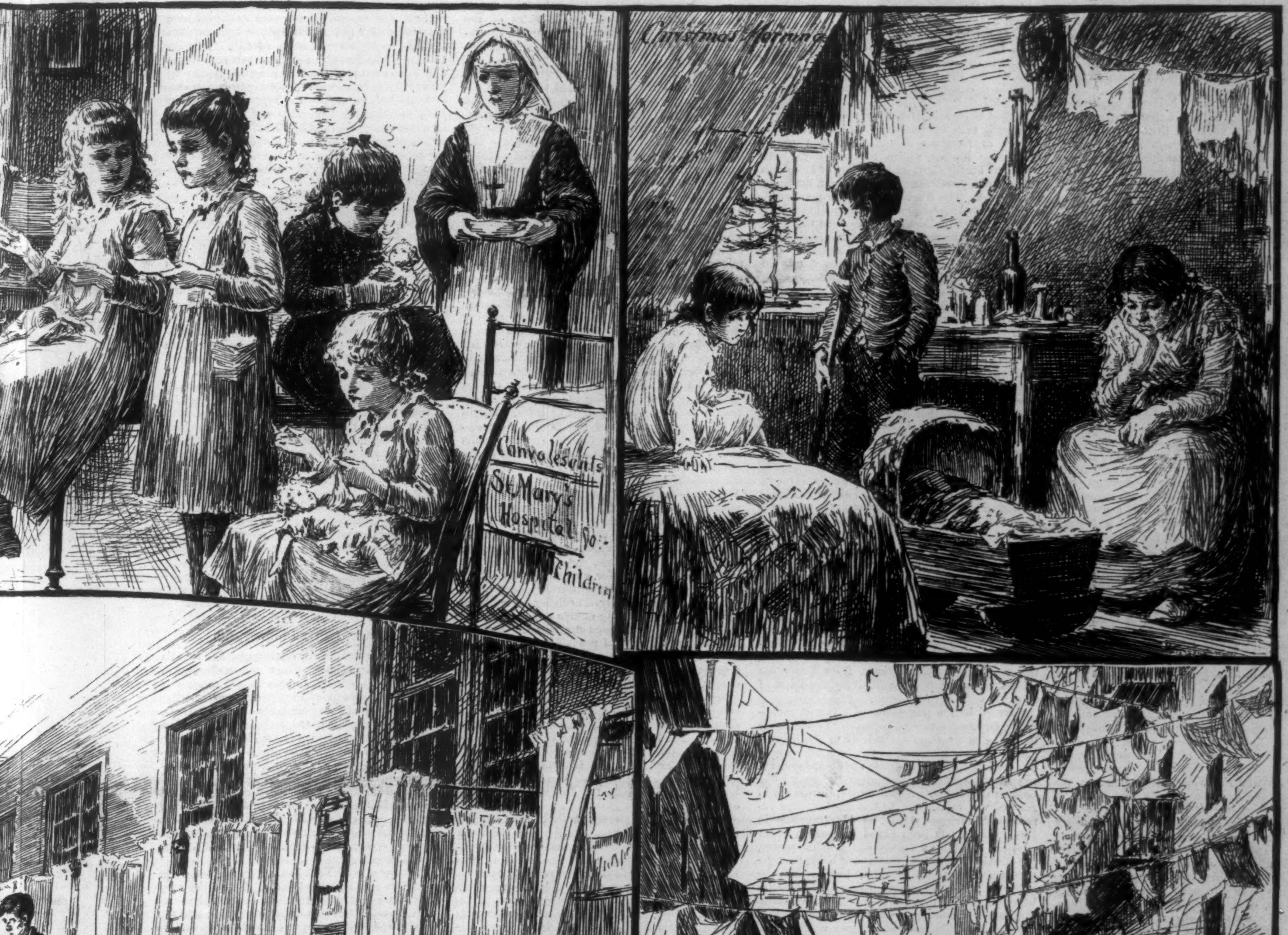
* Curiously enough, Leo's hair has lately been to some small extent regaining its color; that is to say, it is now a yellowish-gray, and I am not without hopes that it will in time come quite right.


Children's Ward
St. Luke's
Christmas Eve

HOSPITAL SUNDAY IN NEW YORK—CHRISTIAN WORK AM


Canvolesents
St. Mary's
Hospital for
Children
Christmas Morning
A Ward in St Luke's
An Ambulance Call
Homes of the Poor

AMONG THE POOR.—Drawn by Frederic Dielman.—[See Page 7.]

JOHN ERICSSON.

This illustrious engineer was born more than eighty-three years ago, July 31, 1803, in the province of Wermland, Sweden. His father, Olof Ericsson, was proprietor of mines, his mother, Sophie, being the daughter of an iron-master. Nils, John Ericsson's elder brother, rose to be baron, colonel of engineers, chief of the state railways, and with his three sons sat in the Swedish Diet.

At the age of ten, John Ericsson constructed a miniature saw-mill and a pumping-machine that attracted the notice of Count Platen, chief of the great ship-canal intersecting the Swedish peninsula. At twelve, the youthful contriver was made a cadet of mechanical engineers; the following year, a leveller on the canal. At seventeen, Ericsson entered the army as ensign, and rapidly reached a lieutenancy in consequence of his beautiful military maps, which had attracted the special attention of King Charles John (Bernadotte).

When about twenty-two years old, Lieutenant Ericsson constructed a flame-engine of 10 horse-power, and journeyed to London in 1826, on leave, to introduce it. Once there, he resigned his commission. The resignation was accepted, but first he was promoted to a captaincy. He has never returned to his native country, but from it has received many honors and decorations, while in 1867 a great granite monument, quarried by the unpaid labor of the miners, some of whom had worked for his father, was set up with gala festivities in front of his mansion, inscribed, "John Ericsson was born here in 1803."

During the next few years, in England, Ericsson produced about forty machines, of which a third were patented. They included a file-cutting device, an instrument for taking soundings (still in use), a hydrostatic weighing-machine, an apparatus for making salt from brine, a pumping-engine, a rotary steam-engine, and a famous system of artificial draught for steam-boilers, dispensing with huge smoke-stacks, and economizing fuel. To the steam-ship *Victory*, in 1828, he applied the principle of condensing steam and returning the water to the boiler; and four years later he gave to the *Corsair* the centrifugal fan-blowers now generally used in American steam vessels. In 1830 he introduced in the locomotives King William and Adelaide the link motion for reversing steam-engines. In 1834 he super-heated steam in an engine on the Regent's Canal Basin.

In 1829 the Liverpool and Manchester Railway had offered a prize for competing locomotives. Ericsson planned and hurried to completion an engine, the Novelty, in seven weeks. The London *Times* of October 8, 1829, said that in speed it "far excelled" all competitors; that "it was the lightest and most elegant carriage on the road yesterday, and the velocity with which it moved surprised and amazed every beholder. It shot along the line at the amazing rate of thirty miles an hour." But Stephenson's Rocket proved superior in point of traction. "In locomotive engineering," wrote John Bourne, nearly half a century later, "nothing more original or more elegant has been produced than the Novelty." Ericsson in 1829, nearly threescore years ago, constructed a steam fire-engine, employed in putting out a fire in the Argyle Rooms. Another, the next year, guarded the Liverpool Docks; a third was sent to Berlin. Ten years later, in 1840, the Mechanics' Institute of New York gave its large gold medal to Ericsson for the best system of fire-engines.

His famous caloric engine was produced in 1833. The scientific world of London hailed it with astonishment. Lardner, Ure, Faraday, and Sir R. Phillips gave special attention to it. The high temperature evolved prevented that first machine from becoming practical, while twenty years later, in 1853, a voyage of the caloric ship *Ericsson*, a vessel of 2000 tons, 260 feet long, from New York to Washington and back, showed that, though economical in fuel, the new heated-air motor could not produce speed enough at sea for commercial purposes, nor compete on any large scale with steam. Still, it has been applied successfully in more than six thousand engines to minor useful purposes — pumping, printing, hoisting, grinding, telegraph instruments, sewing-machines, and so on. The American Academy of Arts and Sciences awarded the gold and silver medals of the Rumford premium to Ericsson "for his improvements in the arrangement of heat, particularly as shown in his caloric engines of 1858." This was the second bestowal of the Rumford medal in this country.

But we go back now to chronological order, and come upon that device of supreme importance, the screw-propeller. In 1837 Ericsson built a tug, 40 feet by 80, with 3 feet draught, having two propellers of 5½ feet diameter, invited the British Admiralty to inspect it, and towed their barge at a rapid rate; but their lordships solemnly concluded that as the motive power was in the stern, the novel craft would not steer! Ericsson, in 1839, came to America, and in 1841 began to build the *Princeton*, the first naval vessel that ever carried her machinery under the water-line, out of the reach of hostile shot. This vessel dictated reconstruction to the fleets of the world. The *Princeton* included other inventions of Ericsson—a direct-acting steam-engine of unusual compactness; a telescope smoke-stack, in place of the tall ordinary pipe; a centrifugal blower in the hold; a gun-carriage with machinery for taking up the recoil, the self-acting lock allowing the gun to be fired accurately. The London *Mechanics' Magazine* has said: "The undivided honors of having built the first practical screw steamer, the first screw war ship, the first cupola [turret] vessel, belong to John Ericsson."

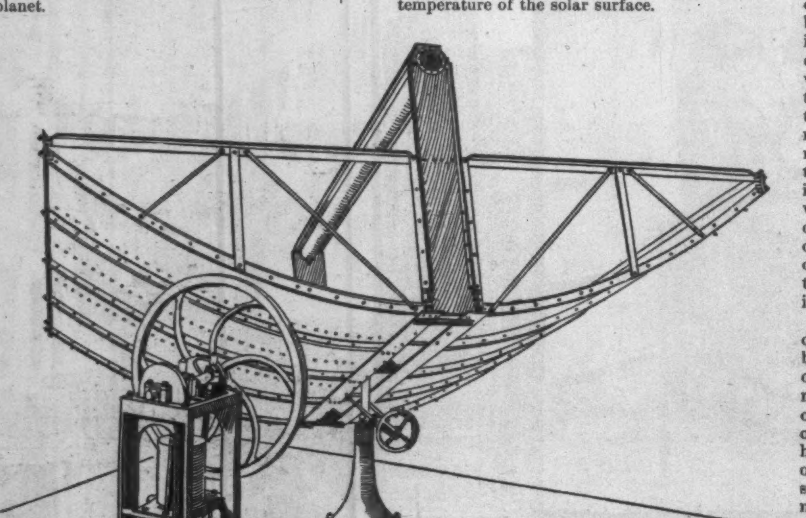
To this first turret vessel we now come. Such a device had been offered by Ericsson in 1854 to Napoleon III., and in the fall of 1861 he proposed it to our Navy Department. By extraordinary energy and executive skill, the *Monitor* was launched, with steam-machinery complete, a hundred days from the laying of the keel plate, and arrived in Hampton Roads just in time to defeat, March 9, 1862, the Confederate iron-clad *Merrimac*, which had destroyed the *Cumberland* and *Congress*, and was about to sink or disperse the rest of the government's wooden fleet. But for the *Monitor* the whole face of the war might have been changed, and European interference attempted.

A fleet of iron-clad vessels of the *Monitor* type was built with extraordinary rapidity after the victory at Hampton Roads. Six of them, in Charleston Harbor, within fifty-two days, were struck by hostile shots an aggregate of 629 times without one penetration of side armor, turret, or pilot-house. The *Weehawken* defeated and captured the Confederate ram *Atlanta*, and the *Montauk* destroyed the *Nashville*. In 1864 the Monitors captured the ram *Tennessee*. Russia, Sweden, Norway, and Turkey adopted the American turret system, and when the *Miantonomoh* crossed the ocean, even the British construction yielded, and carried it out on a far larger scale.

Now, therefore, Ericsson proposes, for defensive war, to destroy the tremendous naval structures his system caused to be built up. His new iron vessel, 130 feet long, carries a submarine 16-inch gun 30 feet long, which discharges a projectile weighing 1500 pounds, and containing 300 pounds of gun-cotton, against an iron-clad's hull, beneath the customary water-line armor belt, with such effect that water-tight compartments will be of no avail. As Ericsson called his locomotive *Novelty*, and his impregnable battery *Monitor*, so he calls this later creation *Destroyer*.

The variety of Captain Ericsson's work is only less remarkable than its intrinsic importance. In 1851, at the London World's Fair, he exhibited an instrument for measuring distances at sea; a hydrostatic gauge for fluids under pressure; a gauge for the volume of water passing through pipes; the alarm barometer; a pyrometer; a measure for fluids by the velocity with which they pass through definite apertures; a sea lead for use without rounding the vessel to the wind. His contributions to the Centennial Exhibition of 1876 are described in a volume of 600 quarto pages. Amongst his scientific investigations are remarkable computations of the influences tending to retard the earth's rotary motion, including the weight of material taken from below the earth's crest and piled above it by the hand of man.

Favored by the possession of a robust constitution and ample means, Ericsson has been able to devote many years exclusively to the investigation of solar heat, and to the determination of the mechanical energy which the great luminary has in store for mankind when the coal fields become exhausted. A sun motor, illustrated in *Nature*, vol. xxix., page 217, erected by the experienced engineer, 1883, on his premises in Beach Street, has been found to develop under ordinary sunshine a steady and reliable power, the striking features of this motor being that the part which receives the radiant heat, unlike the boiler of the steam-engine, does not deteriorate by the action of that heat—a trifling consideration, however, compared with the advantage that the inexhaustible solar storehouse supplies the fuel free of cost or transportation at every point within the temperate and tropical regions of our planet.



THE SUN MOTOR.

Although the sun motor has thus been in actual operation for little more than three years, it was the result of experiments conducted during twenty. Its leading feature is a rectangular trough, whose curved bottom, lined with polished plates, reflects the sun's rays toward a cylindrical heater placed longitudinally above the trough. This heater contains the steam or air employed to transfer the solar energy to the motor by cylinders provided with pistons and valves resembling those of ordinary motive engines. The bottom of the trough, as described by Captain Ericsson, whose language in various communications to *Nature* we shall follow with all practicable closeness, consists of straight wooden staves, supported by iron ribs of parabolic curvature secured to the sides of the trough. On these staves are fastened the reflecting plates of flat window-glass, silvered underneath.

The illustration published herewith shows that the trough, 11 feet long and 16 feet broad, including a parallel opening in the bottom 12 inches wide, is sustained by a light truss attached to each end, the heater being supported by vertical plates secured to the truss. The heater is 6½ inches in diameter and 11 feet long, exposing 1274 superficial inches to the action of the reflected solar rays. The reflecting plates, each 3 inches wide and 26 inches long, intercept a sunbeam of 23,400 square-inch section. The trough is supported by a central pivot, around which it revolves. The change of inclination is effected with the most perfect ease by a horizontal axle, as the entire mass is accurately balanced.

The motor in the illustration is a steam-engine with a working cylinder of 6-inch diameter and 8-inch stroke. The piston-rod passing through the bottom of the cylinder operates a force-pump of 5-inch diameter. By a cross-head secured to the piston-rod below the cylinder, and by connecting rods, motion is imparted to a crank shaft and fly-wheel applied at the top of the engine frame, thus indicating the capability of the engine to work either pumps or mills. The illustration does not show the flexible pipe employed to convey the steam to the engine, nor the steam chamber attached to the upper end of the heater. The average speed of the engine during the trials of 1883 was 120 turns per minute, the absolute pressure on the working piston being 35 pounds per square inch. The steam was worked expansively in the ratio of 1 to 3, with a nearly perfect vacuum kept up in the condenser enclosed in the pedestal which supports the engine frame.

Such is the device for overcoming the objections which had, up to its appearance, been urged against the practicability of utilizing the sun's radiant heat for producing motive power. Among these objections had been the cost of large reflectors, the difficulty of producing accurate curvature on a large scale, and the labor required to prevent the polished surface from becoming tarnished. But the sun motor does not demand a structure of great accuracy, provided only the staves are so secured to the iron ribs that the silvered plates reflect the solar rays toward the heater. The brief comment of Captain Ericsson on his motor is that, in view of the facts set forth, "experts need not be told that the sun motor can be carried out on a sufficient scale to benefit very materially the sunburnt regions of our planet."

The operation of the sun motor in 1883 enabled Captain Ericsson to prove that the calculations made by certain French scientists, notably Pouillet, Vicaire, and Sainte-Claire Deville, assigning to the solar surface a comparatively low temperature, were incorrect, and that Newton's far higher estimate on the same subject must be accepted. Without repeating the practical demonstration derived by Captain Ericsson from the use of the sun motor, it may be stated that it determined with sufficient exactness the minimum temperature of the solar surface.

Yet the cylindrical heater of the sun motor, constructed as it was solely for generating steam or expanding air, did not accurately determine the area acted upon by the reflected radiant heat. The rays, in the first place, acted only on part of the bottom of the heater, and their density also diminished gradually toward the sides, while imperfections in the surface of the plates prevented the exact course of the terminal rays from being defined. Accordingly the following year, 1884, Captain Ericsson erected a solar pyrometer of large dimensions. It was a polygonal reflector, composed of inclined mirrors, with a central conical heater, each point of whose surface received an equal amount of radiant heat in a given time. The mirrors were ninety-six in number, and the reflector and conical heater were sustained by a flat hub and eight radial spokes bent upward toward the ends at an angle of 45°. Without attempting to transfer here the elaborate scientific calculations of Captain Ericsson, it may be said that the conclusion of the investigation carried out by him during the summer solstice of 1884 was that the temperature of the solar surface cannot be less than 3,060,727° F. This corresponds remarkably with the deduction from the Newtonian doctrine that the temperature was 2,936,000°F., and it widely differs from the conclusion of sundry French *savants* that the temperature does not reach 3000° C.

It would be interesting to describe still another instrument of Captain Ericsson's, the pyrheliometer, designed to show the intensity of the sun's rays, and also his investigations of the surface and temperature of the moon. Seventeen years ago he announced before the American Academy of Science that the theory that the moon was devoid of water was a great error. He demonstrated that the great "ring mountains" cannot be composed of volcanic matter—"mineral substances originally in a state of fusion"—but are inert glaciers made permanent as granite by perpetual intense cold. Pursuing this subject during the present year, Captain Ericsson has shown exactly how the annular glaciers are formed by vortex columns of vapor, and how the conical hills within the circular walls are formed. One of his conclusions is that the water on the moon bears the same proportion to its mass as the water of our oceans to the terrestrial mass, and that the aggregate water of the moon is 2,028,600 cubic miles.

Returning from our glance at these investigations to the sun motor, it may be said that its possibilities are as yet not only undeveloped, but perhaps undreamed of, and that posterity will pronounce the true verdict upon it.

THE CHURCHES AND THE PEOPLE.

By REV. DANIEL CURRY, D.D.

The problem of the city has become the Sphinx's riddle of modern times. The wise men often seem disposed to give it up, and yet failure to solve it is the sure presage of the direst disaster. The concentration of vast populations in small areas, moderately educated, fed, and housed, and the whole mass instinct with the spirit of democratic individualism and self-assertion, presents the recognized difficulties of city government and municipal politics in aggravated proportions. The field of discussion thus opened is a very wide one, but we propose at this time to consider only one of its phases—that seen within the sphere of church work. The subject, even when thus circumscribed, is broad enough as to both its demands and its possibilities.

The city of New York has a population of about a million and a half of souls. These live very closely compacted together, and they are thus rendered almost abnormally active, and especially sensitive to social influences. And yet within this narrow area, so crowded with inhabitants, there is a clearly marked local distribution of kinds and classes of persons. Fourteenth Street, the first broad thoroughfare extending from river to river, is the recognized line of demarkation between the down-town and the uptown portions of the city, with about six hundred thousand inhabitants in the former, and nine hundred thousand in the latter. Within the former most of the heavy business of the city is done, and some portions of its real estate command the highest prices, and yet the resident population is comparatively poor, and in those parts are the locations of squalor and wretchedness so often dilated upon by those who depict the crime and misery of certain phases of our city life. The owners of most of the property of this region reside elsewhere—chiefly in the uptown portion of the city, but not a few of them in other parts.

The whole number of churches in New York classified as Evangelical-Protestant is somewhere between four and five hundred, of which scarcely one-quarter are below Fourteenth Street, and these not generally the more capacious ones. All other orders of churches in the city amount to a little over one hundred, of which the Roman Catholics have more than one-half, and the Jews fully half of the balance. But while the Protestants have so large a proportion of the churches, they cannot claim more than half of the population as even nominally of their faith, and over very considerable portions of these their direct religious influence is lamentably small. From this nominally Protestant population of 750,000 not less than 150,000 must be set aside as entirely irreligious in both form and spirit, so leaving 600,000, about two-fifths of the whole, as the proper Protestant population of New York. Of these it has been estimated (approximately from statistics) that about 100,000 are church members and communicants, which, after deducting one-third for children and other incapables, would show that about one-fourth of the adult Protestants of the city are communicants in what are termed evangelical churches.

In confining our attention to these we would not be understood as intimating that no other churches are doing anything for the moral and religious culture of their own people; nor are we unmindful of the fact that other than properly religious and ecclesiastical agencies are doing very much for the moral and physical welfare of the people. The Roman Catholics probably have some sort of claim (but often a very feeble one) on about one-half of the population of the city, and the Jews and other religionists are nearly a hundred thousand more, and yet there is, no doubt, a vast amount of virtual heathen among us. The question, therefore, now to be considered involves the active relations of the Protestant churches to these ungospelled multitudes, and to the whole population of the city.

These churches, as a rule, recognize their duty to offer the gospel to all men; but it is well known that the effectiveness of that offer is largely qualified by the conditions among which it is made. It is found that it is not enough to build houses of worship, and institute in them the ordinances of religion, with the general invitation to the people to come and avail themselves of what is so offered. Though made in all good faith, such invitations will not usually be accepted by the outside multitudes except through the most earnest and persistent persuasion. If the churches expect to benefit the godless masses about them, it must be done by efforts that answer to the Scriptural expression, "compel them to come in," and in such efforts many—probably most—of the Protestant churches of the city are to some extent engaged. With all their worldliness and love of ostentation and ease, the Protestants of New York are not altogether either unthoughtful or inactive in respect to the unsaved about them. Nearly every church is the centre of a system of Christian activities that reach out toward those beyond its own members; nearly every pastor devotes a share of his time and labor to others than his own immediate flock. Laymen—often those of large and engrossing business occupations—find time to do something in this work. Sunday-schools are, in nearly every case, the most effective kind of local missionary agencies, while women, singly or in organized *guilds* and a variety of church organizations, are constantly engaged in seeking after the unchurched multitudes. Probably the most effective work is done by these somewhat informal and unostentatious agencies; but beyond these there are extensive organizations at work with the special purpose of bringing the blessings of the gospel to as many as can be persuaded to accept them.

The Episcopalians—certainly the wealthiest, and perhaps the most actively aggressive, of our denominations—operate chiefly through their churches or parishes with mission chapels and Sunday-schools. They seem to go forward so quietly that it is not easy to measure the work they are doing, except as its results tell of its extent and effectiveness; and the increase in the number of communicants within the past few years indicates both energy and success. As that denomination comprises a very large proportion of the wealth and higher social position of the city—a class in which earnest Christian zeal is not usually expected—it is all the more gratifying to find among its people a growing sense of their obligation to use their station and influence as well as their property in caring for the poor and less favored classes.

For nearly sixty years there has been in this city, chiefly among the Calvinistic churches—the Reformed Dutch, the Presbyterians, the Baptists, and the Congregationalists—an organization now called the New York City Mission and Tract Society, whose design and efforts have been directed toward the non-church-going classes. It is entirely undenominational and non-ecclesiastical; its methods of operation have been in the form of personal visitation among the poor, distributing religious tracts, visiting the sick, and inducing as many as possible to attend church and Sunday-schools. In some cases Sunday-schools have been instituted, and chapels for religious services; but, because of the want of church accommodations in the lower wards of the city, it was comparatively lately judged to be advisable to build in that part of the city large houses of worship, and to organize regular churches. Four such have been established—to wit, at 151 Worth Street (Five Points), at 280 Rivington Street (De Witt Memorial), at 369 Broome Street (The Tabernacle), and at 63 Second Street (Olivet Church). In building these, including cost of land, more than half a million dollars have been expended, and the four churches have an aggregate membership of nearly fifteen hundred, with more than twenty-five hundred pupils in their Sunday-schools, and these are only one part of the society's Sunday-schools. The churches are also provided with parlors, library and reading-rooms, and gymnasiums, and besides all the usual religious exercises they provide for a variety of useful and instructive entertainments and exercises. Besides aiding in this work, some of the larger churches of these denominations have also their own local missions, in which regular services are maintained, and out of such have been formed a number of independent and self-supporting churches.

The Baptists, besides co-operating with the general society, have also their own city missionary work among Germans and Swedes and Bohemians and Chinese, as well as in some of the more destitute parts among the native and English-speaking people. A people's Baptist church, on the corner of Bedford and Downing streets, to be run upon the "faith" principle, was projected a few years ago, and is said to be meeting with a moderate but wholesome degree of success among all that can be persuaded to accept its benefactions.

The Methodist churches of the city were formerly nearly all entirely free-seated and free to all comers, and the denomination willingly accepted the name of the church of the common people, and its whole work was carried on as an essentially missionary agency. But at length some broader provision for aggressive work seemed needful; and about twenty years ago an association was formed, which has continued in active operation, with some important modifications, to the present time. It is now "The New York Church Extension and Missionary Society," and has under its care about twenty churches, located in all parts of the city, with an aggregate membership of nearly three thousand, with over four thousand pupils in its Sunday-schools. A number of the churches that it helped into life and sustained for a season have become independent and self-supporting, and some of those still receiving help are expected soon to follow. The importance of the society to the work of the denomination in the city may be seen in the two facts that since it has been in full operation no down-town church has been abandoned, and, with one or two exceptions, every new church that has been founded began its course under its auspices.

The population of New York, and especially the American-born and Protestant portion of it, has been for more than a quarter of a century rapidly moving away from the lower wards. Some have gone to Brooklyn and some to New Jersey, but most have sought homes in the upper part of the city. The tide has at length fairly reached the Harlem River, and is passing beyond it into the annexed district. The removal of so many of their members has weakened the down-town churches, which now need help in order to continue their existence and usefulness, and because those who compose the advance of the new-comers in the uptown neighborhoods are chiefly persons of moderate incomes, they need help in providing for themselves places of worship. Thus a double burden rests upon the society, which represents the united Methodism of New York, and calls upon it to act as both a church-sustentation and a church-extension agency. Its opportunities in the newer parts of the city are practically unlimited, but as every new church costs from one hundred thousand to two hundred thousand dollars, its managers are compelled to move cautiously, and to limit their work so as to correspond with their means. The same considerations will apply with but little differences to all the denominations.

With the large accessions to the German population, Lutheran churches and church work among the Lutherans have greatly increased within the last score of years. Their methods are chiefly those of parish agencies, including regular churches and missions, and both Sunday-schools and parochial schools. The German language is chiefly though not exclusively employed, and in that way multitudes are reached that could not be profited by any other. The attendance upon these churches and schools would indicate that the nominal Protestants of Germany are not so generally given up to godlessness as has been sometimes supposed.

Quite naturally they who have not been associated with this kind of work have but faint and imperfect conceptions of what is being done; and if they are thoughtful persons, when they think of the iniquity that abounds on every hand, they are tempted to conclude that our Christianity is fighting an unequal battle with the combined forces of evil. And it thus happens that some good people are disposed to take pessimistic views of things, and to conclude that in the midst of all our material prosperity—the increase of wealth and refinement, of luxury and ostentation—the city is rapidly becoming a Sodom or Babylon, and that, too, despite all that Christianity is doing, or seems to be able to do. But this doubting and dreading would be removed by only a very partial acquaintance with the facts of the case. Beyond all that can be written down in our tables of statistics, an immense flood of saving influences is steadily flowing out upon society in the forms of private charities and almsgiving, of personal services, instructions, and admonitions, of quiet labors intended to restrain the erring and to rescue the perishing, and in all ways possible to do good to the souls and bodies of men. And while it is upon such influences that society depends for its stability and security, these themselves have their source and supply in the abiding Christian sentiments which the churches inculcate and fashion into concrete characters. The gay and thoughtless world knows comparatively little of either the private or the organized benevolences which pervade and permeate Christian society, and yet they exist, and in them is the security of the commonwealth. The solution of the "problem of the city" is found in the Christian character of the people, and the work at which we have so hastily and inadequately glanced, with its assured results, sufficiently attests the adaptability of the gospel, administered in its simple forms, to save even such a city as is ours. The angels' song of nearly nineteen hundred years ago still rings out at this Christmas-tide in the same blessed words of consolation, assuring all that wherever the gospel prevails there will be "peace on earth and good-will to men."

We have purposely referred to some of the specifically churchly agencies at work among us, because we recognize these above all others, though not without the co-operation of others, as those upon which the public welfare must depend. But in estimating in estimation the church's agencies it is especially needful to consider others besides the purely religious effects and relations of these things. We hear much about the menace of our social order by the growth of socialism and anarchism and kindred social and political heresies, the prevalence of intemperance, and the decay of the family, and we are not disposed to make light of these things. But when we remember that the churches—and here we are glad to include Roman Catholics as co-workers—stand as a breakwater against the incoming of that tide, the showing that has been made may relieve the worst forebodings. Against such enemies our churches are our best fortresses, and our Sunday-schools are worth more than all the nation's military and naval academies. With a constantly increasing infusion of living Christian principles among the masses, the problem of the city will solve itself.

SAN ANTONIO.

"If a man wants to die, he must leave Bexar," is an old Mexican saying. San Antonio de Bexar is the full title of the Texan city of San Antonio, and the Mexicans meant this town and its neighborhood when they uttered the aphorism in question. Situated on high land, seventy miles to the southwest of Austin, its climate is considered particularly healthful. Its atmosphere is dry and its temperature equable. It draws many travellers in search of health, and many others in search of curious and picturesque surroundings. Both sorts of travellers are well compensated.

One hears more of the new things that are in Texas than of the old. The cow-boys and cattle kings, and the leagues of wire fencing that Texans are periodically reported ready to go to battle about, fill the mental picture that one draws of the great State, rather than the missions and the other stone antiquities left there out of the Spanish civilization. But the old things are eloquent, and many people who are careless of the wire fences and the charms of modern enterprise go far to see them.

The Military Plaza and the Mexican market which is held therein are among the interesting features of the town. The market is a favorite resort of the Mexican population, who go there not alone to trade, but for purposes of recreation as well. In the early morning is the market proper. In the evening, tables are spread with prepared dishes dear to the Mexican palate, and the plaza is turned into a great restaurant, whose patrons sit on wooden benches, and eat supper with extreme satisfaction by starlight and torchlight. Mexican cooking has a good deal of red pepper in it. Some strangers like it, but perhaps more do not.

The Cathedral of San Fernando stands near the Military Plaza. It was built for a parish church in 1732. In the town proper stand also the ruins of the famous Alamo. The Alamo was originally a mission. It was the second in Texas, and was founded in the valley of the Rio Grande by Franciscans of the Apostolic College of Queretaro in 1703. Its location was several times changed, the removal to the present site taking place in 1774. Soon afterward the mission was changed into a fort. It is hardly necessary to recall the famous defence of the Alamo, made in the war for Texan independence in 1836, when **Travis**, **Crockett**, **Bowie**, and its entire garrison of 145 men fell before the 5000 attacking troops of **Santa Anna**.

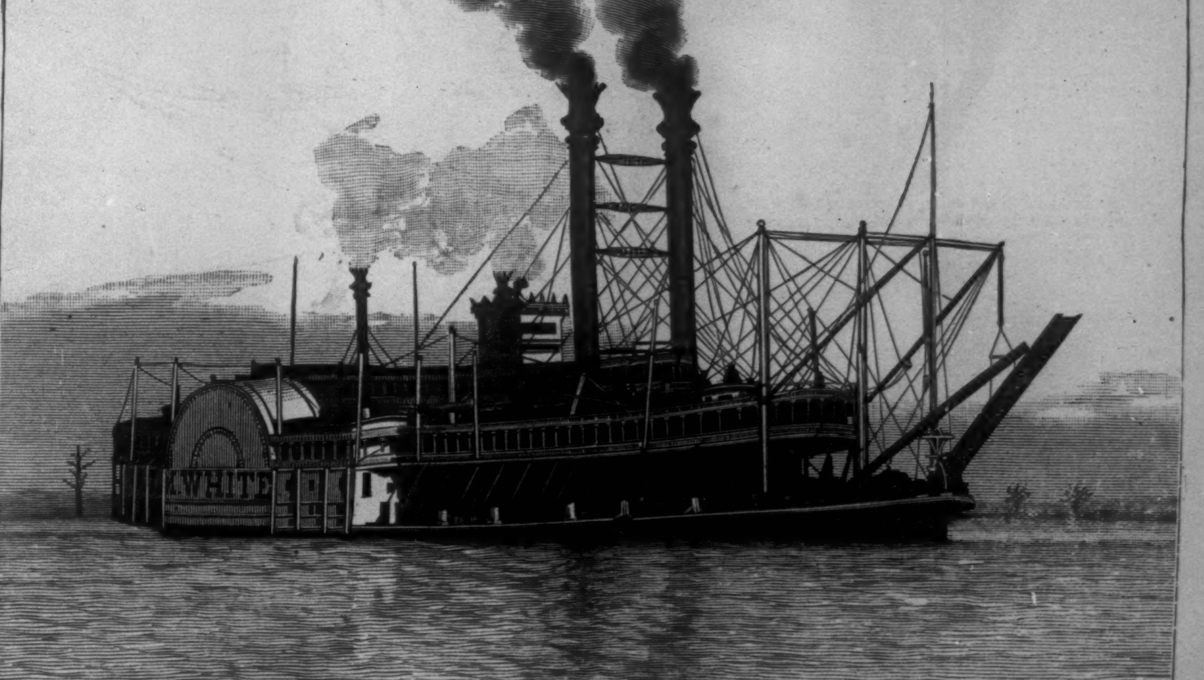
At intervals along the banks of the San Antonio River, outside of the town, stand four missions built by the Franciscan fathers in the early half of the last century. The first, called the Mission Conception, is two miles below the city. This mission, which was founded in 1730, has been allowed to go to utter ruin. In 1850 a traveller noted that it was "desolated and desecrated; the church portion was an enclosure for cattle." The second mission, the Mission of San José, four miles from the town, was founded in 1720. This is the most interesting mission of the four. **Huica**, of Spain, spent a number of years in executing its rich carvings. The ornate doorway is thirty-five feet in height. Six life-size statues were originally grouped about this doorway. One of these has disappeared, and two are headless. The Mission of San Juan, founded in 1731, is six miles below the town; and La Espeda, founded in 1716, is nine miles below.

San Antonio is a United States military post, and the parades, which take place twice a week, are always the occasion of a great out-turning of the towns-people.

THE BURNING OF THE "J. M. WHITE."

It is believed that thirty lives were lost by the burning of the Mississippi River steam-boat the *J. M. White* on the night of December 13. The boat was taking on some bags of cotton seed at a landing about thirty miles from Baton Rouge when the fire broke out. It first showed itself as a small light, resembling the flame of a lantern, on the top of a row of cotton bales amidships. It was a quarter after ten o'clock when the boat's great bell was set ringing, and twenty voices took up the cry of "Fire!" Within a very short space of time—some say within a quarter of an hour—the boat was only a charred wreck, burned to the water's edge. The great loss of life was due to the suddenness with which the fire, well fed by the cotton and cotton-seed oil that went to make up the *White's* cargo, spread over the vessel fore and aft, and to a strong eddy in which the boat lay, and which drew those who sprang overboard close in upon the flames. There were eighteen passengers in the cabin, including eight ladies, and the boat carried forty-five passengers, all told. Two men whose gallant conduct saved many lives in this catastrophe were **Andrew Pierson**, a Swedish sailor employed upon the steam-boat, and **Andrew Robella**, a colored fireman. These two, in the face of great danger, lowered a yawl from the burning vessel and carried many persons to the shore, making several hazardous journeys back and forth.

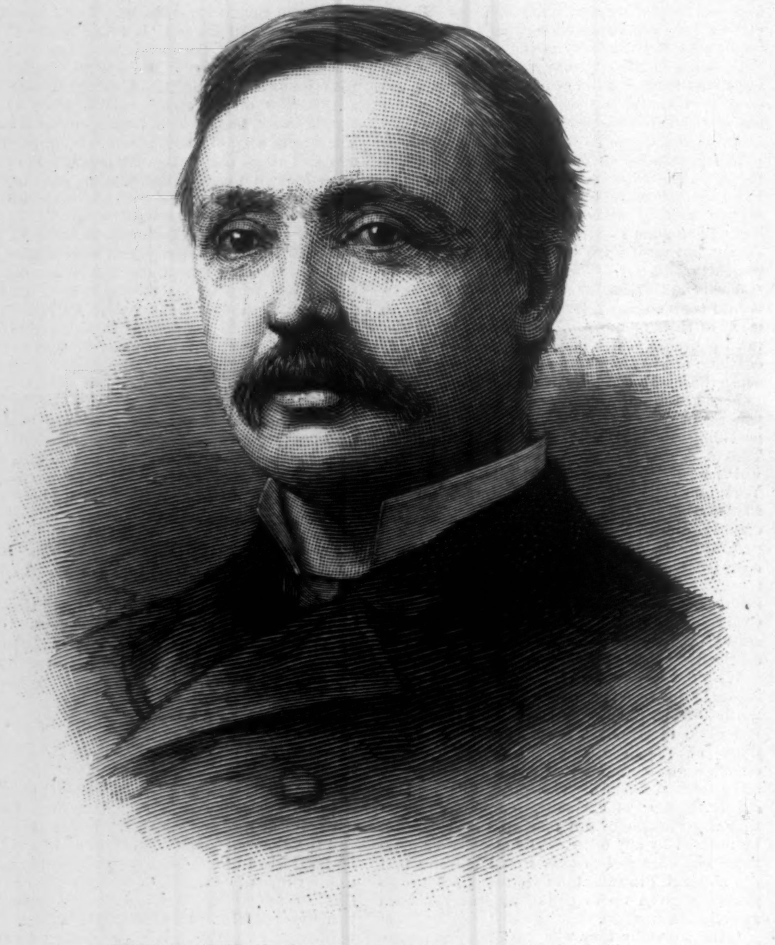
The *J. M. White* was the most costly and sumptuously fitted boat on the Mississippi, and was said to be the fastest. She was built at Jeffersonville, Indiana, and was launched in 1878. She was 321 feet long, had 50 feet of beam, and was 95 feet in width over all. Her main cabin was 233 feet long, 13 feet high, and 19 feet wide, and seated 250 passengers at the tables. The original cost of the boat was $200,000. The insurance upon her was only $27,000.



THE MISSISSIPPI STEAM-BOAT "J. M. WHITE."—Photographed by Blanks, Memphis, Tennessee.

LOUIS K. CHURCH.

Judge Louis Kossuth Church, who has just been appointed Governor of Dakota by President **Cleveland**, recently completed his fortieth year, having been born in Brooklyn December 11, 1846. His ancestors, Captain **Samuel Church** and Colonel **Timothy Church**, served in the Revolutionary army, and the latter rendered valuable services to the State of New York during its troubles with Vermont. His father was **Rodney S. Church**, late of Brooklyn, who achieved distinction as a lawyer. Judge **Church** was educated at the Hudson River Institute, at Claverack, New York, and afterward adopted the profession of the law, practising in his native State. In politics he has always been a Democrat, and as such was elected to the Assembly at Albany in 1882, from the First District of Queen's County, by a majority of 1189 over Mr. S. B. **Caldwell**. His district comprised the towns of Flushing, North Hempstead, and Oyster Bay, Mr. **Church**'s residence being at Hicksville. Prior to this time Mr. **Church** had travelled extensively in the West, and was familiar with its interests. About a year ago he went to reside permanently in Dakota, and was made Justice of the Supreme Court of the Territory. His new appointment is one which is likely to be full of interest and importance, not only on account of the extraordinary growth of Dakota, but of its knocking for admission at the doors of the Union.


LOUIS K. CHURCH.—Photographed by Notman, Albany, New York.

HENRY W. GRADY.

A noteworthy innovation was made on the customary programme at the annual dinner of the New England Society in New York last week, when Mr. **Henry W. Grady**, one of the editors of the Atlanta (Georgia) *Constitution*, was invited to respond to the toast, "The New South." His speech was a very happy one, and it called the attention of the whole country afresh, on an occasion full of significance, to the new forces that are at work in the Southern States. Among these new forces is the press, and among the Southern editors, whose period of activity has been almost wholly the *post-bellum* period, Mr. **Grady** is perhaps more widely known than any other.

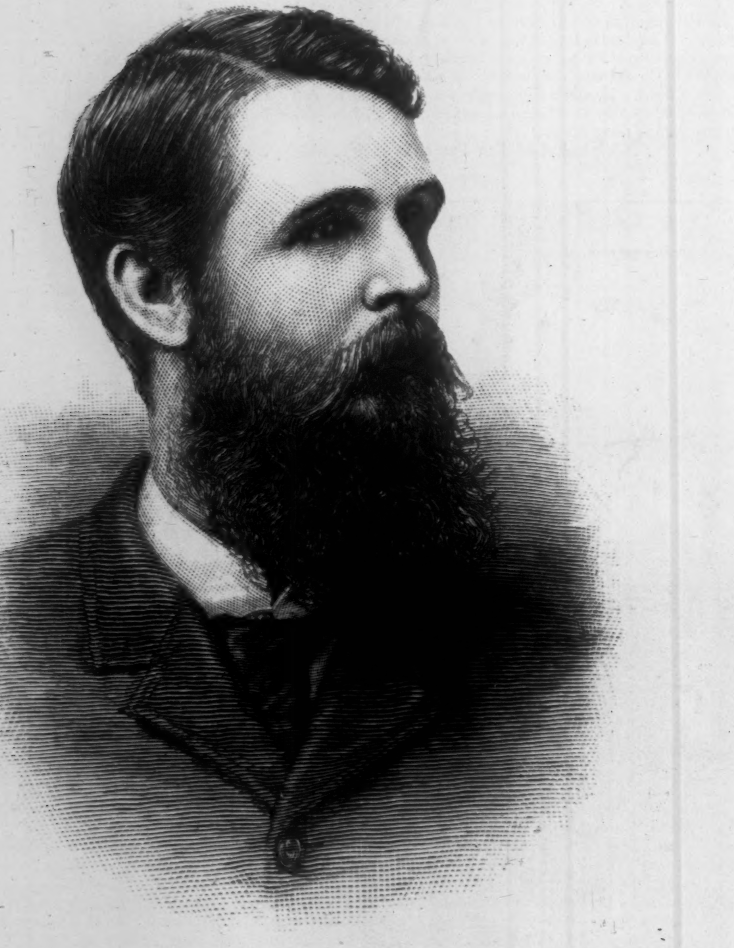
He is a Georgian by birth, and was educated at the University of Georgia, whence in his youth he went with his comrades to see something of the war in its closing scenes. His academic career was completed at the University of Virginia. It was not long afterward that Mr. **Grady**'s talents and taste led him into journalism; and when the city of Atlanta first began its prosperous existence he was the leading writer on the Atlanta *Herald*. This forgotten Southern journal and the well-known *Constitution* were rivals for the patronage of the people of the newly built city, which then was large enough to give profitable patronage to only one of them. It was the *Herald* that succumbed. But the industrious young journalist himself did not succumb, for he took advantage of this apparent misfortune to seek a wider field. He became the correspondent in Georgia of the New York *Herald*. How much of its somewhat more rapid strides forward in industrial prosperity than some of its neighboring States Georgia owes to Mr. **Grady**'s excellent reports in the Northern press of its natural advantages and opportunities for development could not well be overestimated. Nor did he confine himself to mere news reporting for the *Herald*. He set systematically to work to reintroduce Georgia to the more active section of the Union; and he wrote a series of letters, which were afterward published under the title of *Sheep, Gold, and Oranges*, that had not a little to do with the planting of orange groves in southern Georgia and Florida, with the development of wool culture, and with the reopening of the gold mines of his State and North Carolina.

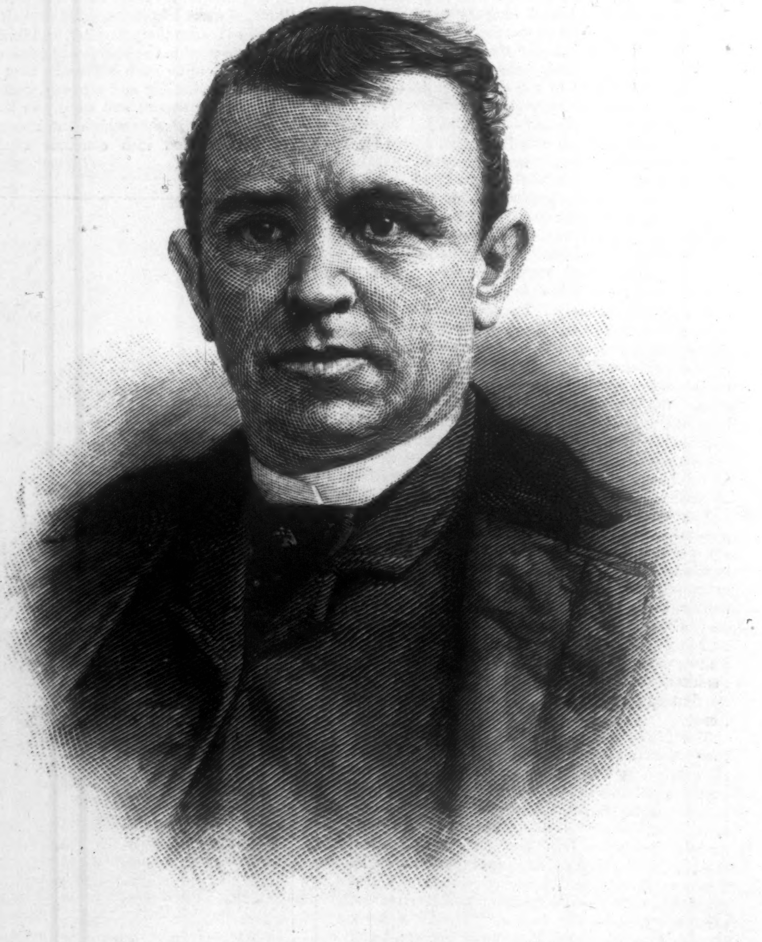
Mr. **Grady** became one of the editors and owners of the *Constitution*, and it is in no small measure due to his versatility and force as a writer that this Southern journal, maintaining practically a monopoly in its field, and improving its opportunity with its growth, has become one of the foremost newspapers in the United States. In so far as Atlanta is Georgia, and it is an important part of it, and in so far as the *Constitution* is Atlanta, and it is an important part of it, Mr. **Grady**'s work has been an important part of the *post-bellum* Georgia—its material development and its broadening thought. He is a journalist who has spent much of his time away from home; and if the readers of the *Constitution* can be taxed with provincialism at all, the blame cannot be laid at Mr. **Grady**'s door. He has been indefatigable not only in making Georgia known to the rest of the world, but likewise in making the other parts of the Union known to the Georgians. He has thus contributed to that liberal spirit of the new South which was at once the charm and substance of his speech at the dinner of the New England Society.

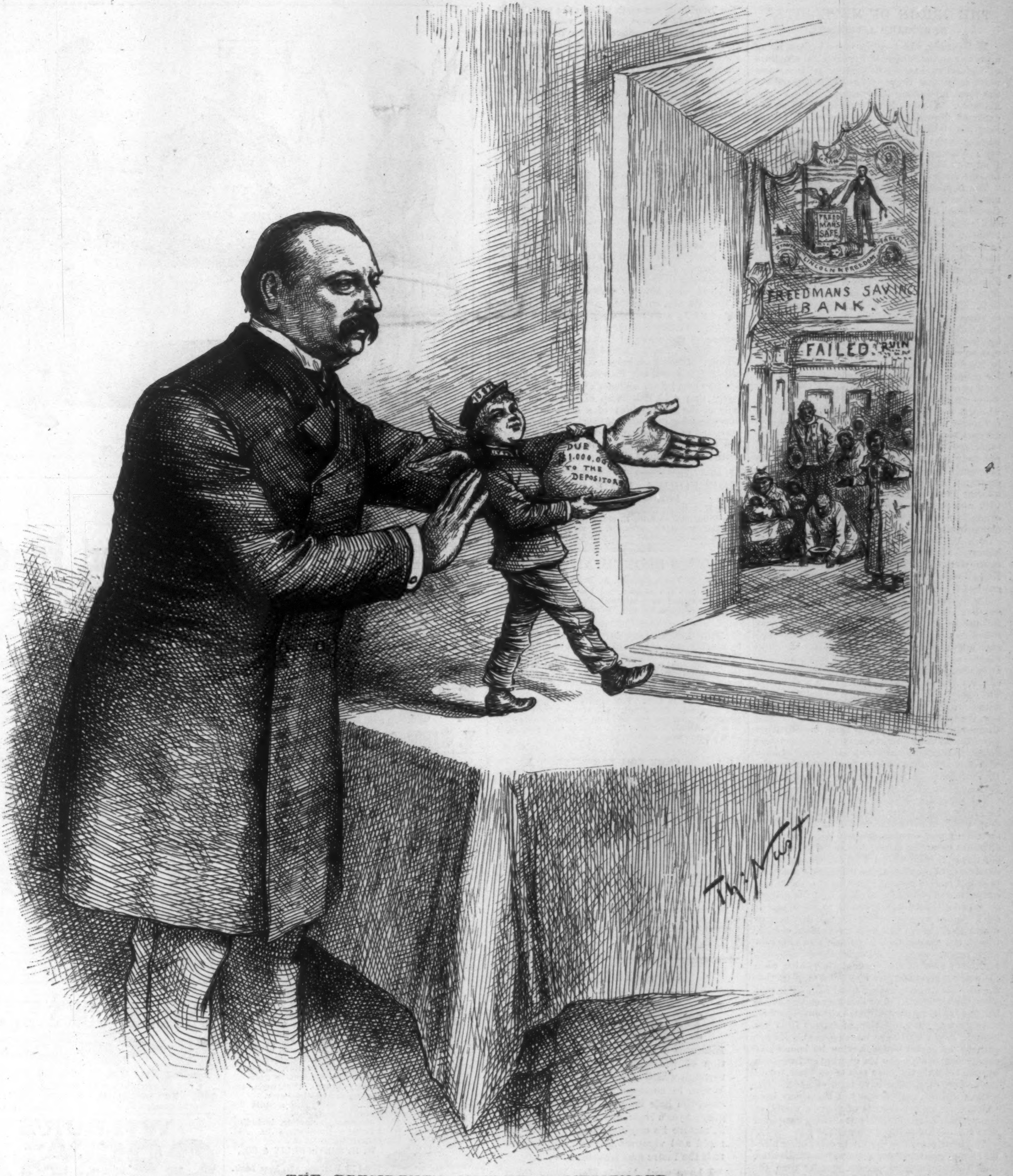
Mr. **Grady** has contributed articles on Southern subjects to **Harper's Magazine** and the *Century Magazine*, and his manuscript is as well known as his face in most of the publishing houses and the principal newspaper offices in the Union.

JAMES PHELAN.

James Phelan is a Mississippian by birth. His father was a Confederate Senator, and was an intimate friend of **Jefferson Davis**. Mr. **Phelan** has just turned thirty years of age, and is of Irish descent. His mother was a **Moore**, of Alabama. He was educated in Kentucky, and afterward went to Leipsic, where he took the degree of Doctor of Philosophy. His thesis was on **Philip Massinger** and his plays. He always had a natural aptitude for business, and accumulated a comfortable fortune by a few happy ventures. He then entered politics, and became a leader among the young men. He is plain, unassuming, and unaffected in manner, and is especially popular with what is called the body of the people. He has a wonderful faculty for remembering names, and stands by his friends with a reckless disregard for self-interest. When he first became a pronounced candidate for Congress the politicians said he had no chance of success; and though he was opposed by the so-called rings of the four counties in his district, he went into the canvass with his whole soul. When the County Convention was held in the first county, he was supposed to be unknown, but he captured three-fourths of the assembly. Senator **Harris** bitterly opposed his nomination; the latter's nephew then withdrew from the race, and Colonel **Josiah Patterson**, a distinguished lawyer, was brought out against Mr. **Phelan**. Mr. **Phelan** had carried every ward in Memphis at the primary election, and as a result **Patterson** withdrew, and **Phelan** was nominated by acclamation. The present incumbent of the office, who is a Republican, was defeated by a majority of four thousand. Mr. **Phelan**'s speech at Covington on the new South has been extensively copied. In this he defines what he calls the new South. He is essentially practical, eschews sentiment, and says he is for the future. He is a hard student, and keeps up with the current literature and politics. He is very fond of field sports, and has written some letters on this subject, which were printed in New York and Chicago papers. He is now engaged on a history of Tennessee. He is the proprietor of the Memphis *Avalanche*. It is remarkable that Mr. **Phelan** was supported for Congress by the *Appeal*, but not by his own paper. His friends regard him as the coming man from the South.


JAMES PHELAN.—Photographed by Blanks, Memphis, Tennessee.


HENRY W. GRADY.



THE PRESIDENT'S NEW-YEAR MESSENGER.

"THIS YEAR DO YOUR DUTY, LIKE A MAN."

THE NEW-YEAR—THE CONSTITUTION, 1787.

A "HAPPY NEW-YEAR!" may well sound over the New World in 1887. We repeat the cheerful greeting to each other, not in vain. Ours is the land of hope, and each new year as it opens upon us seems to present a fairer prospect of general happiness than the past. We have no desire to draw satisfaction from the misfortunes of our neighbors: we would only have them share in our success: but we cannot avoid seeing that much of the prosperity and the fair prospects of the New World comes from its free institutions and its free thought. Instead of empires and jarring despotisms, a band of free States, linked by the ties of a common progress, have spread from the Atlantic to the Pacific.

In Europe the division of the country into a series of kingdoms, empires, and small principalities and republics, enforces an almost ceaseless hostility of interests, a fierce emulation, an eager passion for war. We wish for all the world a happy new year of peace. May the dread destiny that seems to hang over so many European states and families be averted! May the truce of God be proclaimed in Church and Senate!

It is just a hundred years since the Union and Constitution were debated by the leaders of thought and founded among us. In 1786–7 the country had seemed on the brink of ruin. Its enemies in Europe threatened it on all sides. Spain on the west, France on the north, England along the borders, were ready to partition and divide our territory. In our midst was only division, discord, and disorder. There was a rebellion against the laws in almost every State.

In Massachusetts the rebellion seemed almost justified by the impolitic and even tyrannical measures of the Confederate Congress. Vermont was on the eve of revolution. Rhode Island and Connecticut sympathized with the insurgents in Massachusetts. Pennsylvania was disturbed. Kentucky planned a separate government, and a union with Spain. Virginian and South Carolinian politicians proposed a Southern Confederacy. The feeble Congress at Philadelphia, bankrupt, despised, powerless, had lost almost the name of a government. The foreign courts said to the fallen assembly, "When you have a government, we will treat with you."

Such was the condition of the country in 1787. The New-year's Day opened dark and cheerless on mankind. Washington, sick, impoverished, oppressed with debt, looked almost in despair upon his fallen country. All the dark forebodings of the enemies of freedom were nearly justified. Men were incapable of self-government; they must return to the despotism of the Middle Ages.

A considerable party among the people advocated a monarchy; they would even have chosen an English prince to reign over the New World. "Shall we have a king?" said Jay to Washington. "Not, in my opinion, until every other expedient has been tried." And Washington, in real alarm, in 1785 had written to Jay the letter that perhaps fixed the nation's fate. "What a triumph for the advocates of despotism," he said, "to find that we are incapable of governing ourselves, and that systems founded on the basis of equal liberty are merely ideal and fallacious!" The intense mortification with which he looked in that dark moment upon the results of all his patriotic zeal shows itself in his indignant words.

Happily his fierce ardor, his almost boundless influence, founded the Union and the Constitution. Yet we cannot fail to share his generous rage in 1786–7—his resolution to prove that he had not fought for a baseless shadow—and wish that he might survey, after the passage of a century, the wonderful career of freedom in the New World and the Old. In 1786 the opponents of freedom scoffed at our poor divided country, our suffering and almost hopeless people. In 1886 we have proved by a century of progress, unequalled and not undeserved, that men are capable of governing themselves. The empires and states of Europe that overshadowed us in our feeble origin have fallen into comparative weakness; we have a population nearly double that of England or France, and boundless resources that even the intelligence of our people have as yet only imperfectly unfolded. But the most valuable result of the Constitution and the Union is the general diffusion of peace, while Europe, divided and hopeless, trembles on the brink of universal war. America is left at ease to study the welfare of its own people and of mankind. We wish to each other and to all a happy new year, and we have shown to the nations how to attain it. A hundred years of general prosperity under the Union and the Constitution so painfully won and founded show that peace is not unattainable; it may be assured by union and an intelligent progress.

EUGENE LAWRENCE.

THE ORIGIN OF METEORITES.

By RICHARD A. PROCTOR.

M. DAUBRÉE, who is perhaps the highest living authority on the subject of the chemical structure of meteorites, has recently made an announcement respecting these bodies which opens out the most interesting ideas concerning their significance. As these ideas converge from an unexpected direction upon a theory which I have long entertained, I take special interest in discussing them; and I believe the readers of HARPER'S WEEKLY, whether they accept or reject M. Daubrée's ideas and my own kindred theory, will find the study of the matter well worth their while.

The inquiry, from M. Daubrée's point of view, may be said to have begun with the discovery of the celebrated Ovifak meteorites (as they were called), brought to Europe by M. Nordenskjöld (pronounced Nordenshield) from the western shores of Greenland. In 1818 Sir John Ross brought back from his arctic voyage some knives with blades made from pieces of iron found by the Esquimaux near Cape York. As nickel was found in this iron, a meteoric origin was attributed to it. M. Nordenskjöld's attention was attracted to some specimens of the same iron deposited in the Copenhagen museum; and during his voyage to Greenland in 1870 he sought for the iron masses which the Esquimaux described as present in large quantities at Ovifak, near Disco Island. He collected twenty masses, containing not less than twenty tons of iron. At first these masses were regarded as meteoric. But M. Shenstrup, who was sent by the Danish government to find out under what conditions the iron occurred, discovered native iron actually imbedded in the basaltic rocks, the larger grains of this iron being precisely similar in structure to the larger blocks previously found. It was thus incontestably demonstrated that in matter ejected from the earth's interior there is present at times iron alloyed with nickel, like meteoric iron, and having the crystalline texture supposed to be an exclusively meteoric characteristic.

Now M. Daubrée had a year or two before this indicated numerous features of resemblance between meteorites and the deeper terrestrial rocks. He had even shown that bodies not to be distinguished from meteorites can be imitated by partially deoxidizing these rocks. "Most of the eruptive rocks," he remarks now, presenting his full present knowledge of the matter, "differ considerably from meteorites.... A great difference also appears in comparing meteorites with the masses on which the sedimentary strata immediately rest. Thus we never find granite, or any of the minerals associated with it, in meteorites. The analysis of meteorites must be sought in the silicate rocks, which originate in deep regions below the granite. A striking example of this similitude is afforded by the lavas formed from the association of two silicates, pyroxene and anorthite feldspar, and which correspond exactly with the meteorite picked up at Jonzac on the 15th of June, 1819, and with one which fell at Juvinas on the 13th of June, 1821."

This naturally suggests the idea that meteorites had their origin under such conditions as exist deep within the interior of the earth. Only, if meteoric masses were originally so situated, the difficulty naturally arises, how did they ever get out thence? Can we for a moment imagine the occurrence of eruptive action sufficiently energetic to propel masses from the interior of a planet like our earth with velocities so great that the masses so expelled could never return to their parent orb? When we see that the Ovifak iron masses were ejected, at any rate, with tremendous energy, though the date of their expulsion was comparatively recent—certainly following the primary and secondary eras of the earth's life (which were themselves recent in her history as a planet)—the idea seems certainly rendered admissible that when the earth was full of that fiery energy which belonged to her early youth such absolute ejection, or practically such rejection, of masses from her interior might well have been effected. Rather perhaps by geyser action, having its sources of energy deep down below the glowing surface, than by such volcanic action as now takes place, would the process of ejection have been effected. The masses ejected, though many of them may have weighed perhaps hundreds of pounds, would, of course, have been absolutely as nothing compared with the mighty mass of the earth.

The same reasoning applies to every other planet, to the giant planets Jupiter, Saturn, Uranus, and Neptune, and to planets smaller than the earth, to all the planets of our sun's family, and also to all the planets attending upon the other suns.

But also the same reasoning applies with special force and directness to the sun himself, and to his brother suns, the stars. The, sun, indeed we can examine, and he has been actually caught in the act of expelling matter from his interior with velocities so great that the expelled matter can never have returned to him.

Observe, the evidence is not speculative. A mineral indicates by its structure the circumstances under which it was formed. Thus, then, we can say with confidence that meteoric masses were formed under such conditions of temperature, pressure, and combination as exist only in the interior of large orbs in a sunlike state. We can reason out their origin then quite satisfactorily, and this is how the reasoning proceeds: We must suppose silicons and the metals not combined with oxygen, as they are now in the earth. This implies intense heat preventing them from combining. When eventually or locally oxygen came into action, it united first with silicon and magnesium, for which it has greatest affinity; then with iron and nickel. If the gas were all taken up by the former substances, iron and nickel would be left free, disseminated among the stony silicates. This is what is observed in meteorites, and M. Daubrée has been able to confirm the interpretation of the fact by experiment. The interior of our earth tells us the same story. The meteoric masses, of which some few may, but the majority cannot, have come from the earth, tell us, then, in effect that the interiors of the stars, or of such other orbs not now stars, but once sunlike, as they proceeded from, are akin in structure to the interior of our own earth. In analyzing a meteorite we are in fact analyzing a specimen from the interior of a sun. Millions, nay, hundreds of millions, of years may have passed since that meteoric body was ejected; many journeys it may have made from solar system to solar system before, reaching ours, it came into casual conflict with our earth, and so brought its interstellar career to an end. But though it tells us in reality of the condition of some sunlike orb, not as such orb is now, but as it was millions of years back in the past (an orb now perhaps opaque and life-supporting like our earth, or cold and long since dead like the moon), the record may be accepted as telling us what is the structure and condition of probably every orb in space—sun, planet, or satellite—during the time when it is passing through that sunlike stage which is the early youth of every orb's career.

How strange are the thoughts, then, which are suggested by a meteoric mass in one of our museums! That small mass has passed through regions of space so vast that by comparison, not the sun only, but the whole solar system, seems minute. It has been known to us terrestrials for but a few years, but its birth in the celestial spaces must be set millions of years back; and lastly, that cold, dull lump of metallized stone tells of the intense heat of a sun's interior, of overwhelming pressures, of inconceivable disturbance, and of noise so tremendous that in comparison with it all forms of uproar known on the earth seem like dead silence.

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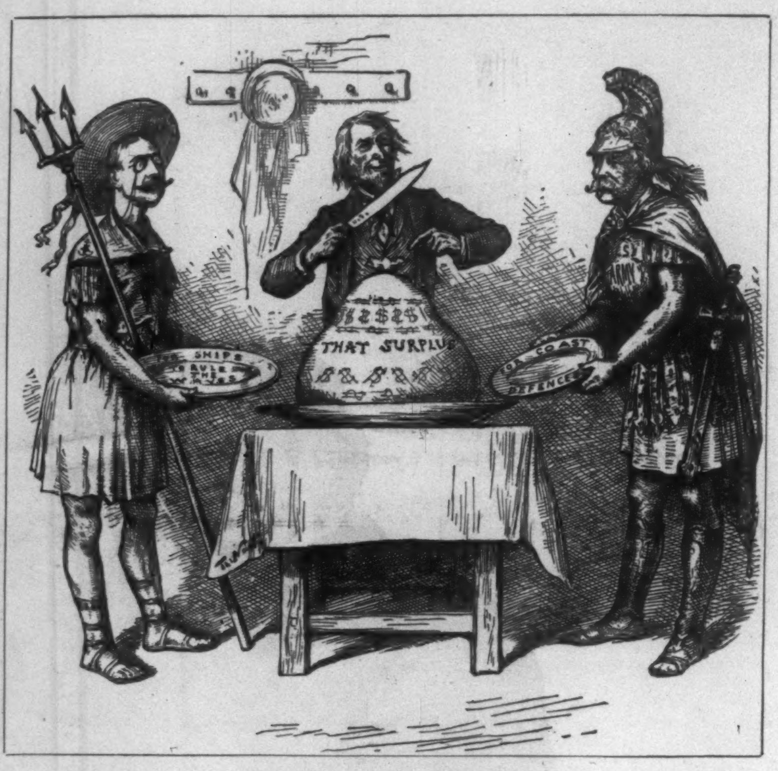

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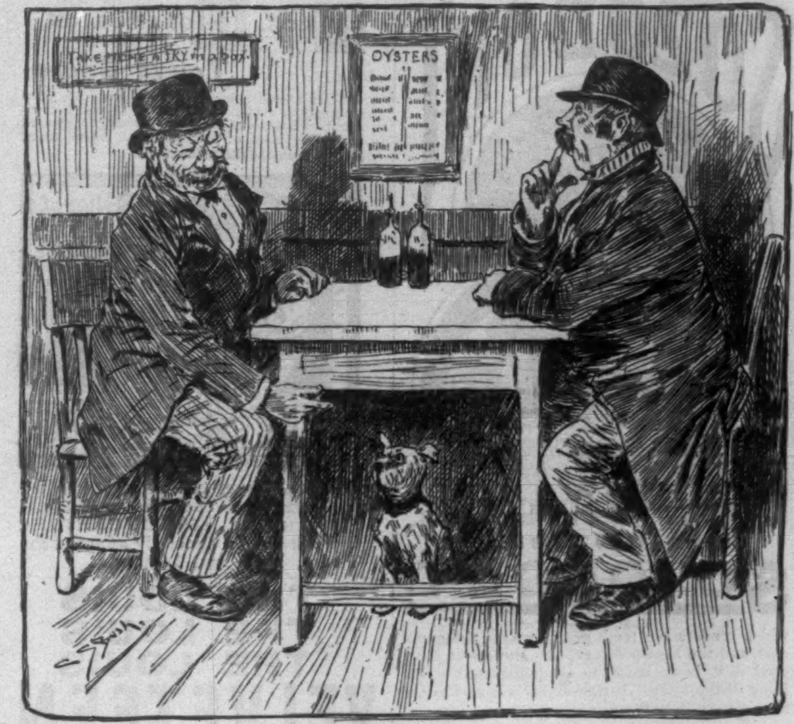

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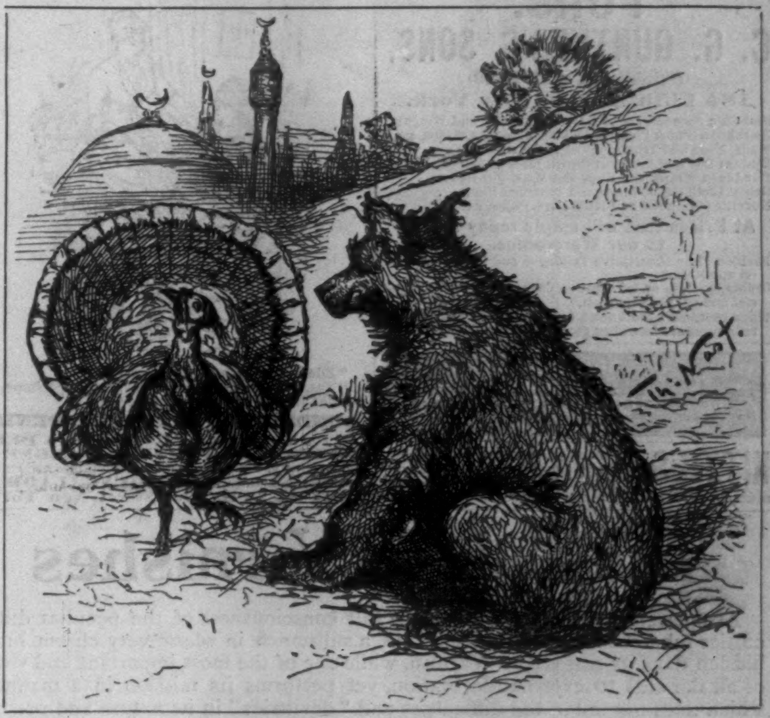
"Mejium. Dere he is, under ze table; an' you bets I don' give him away."



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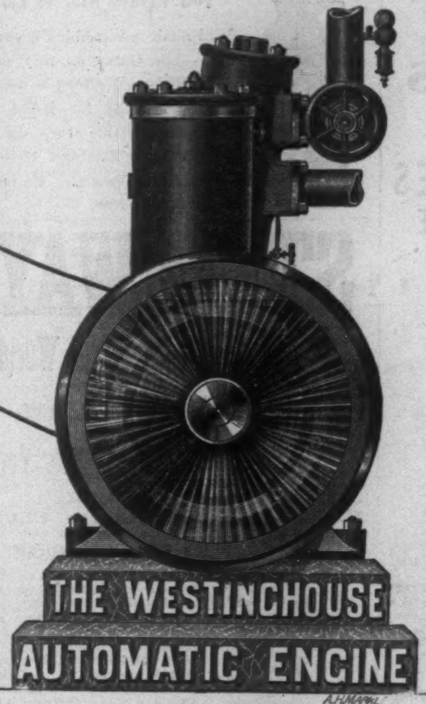

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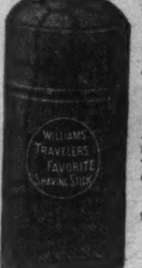
Roulleaux, Dugage, & Co., Suresnes, Fr.,	2d order,	15
Shickle, Harrison, & Howard, St. Louis, Mo.,	2d order,	15
McCord, Ford, & Co., Colfax, W. T.,		15
Decatur Furnace Co., Decatur, Ala.,		15
Lawrence Machine Shop, Lawrence, Mass.,	15th order,	10
Lawrence Machine Shop, Lawrence, Mass.,	16th order,	10
N. W. Wait, Son, & Co., Sandy Hill, N. Y.,		10
F. S. Cole, Grundy City, Ia.,		10
Union Pacific R. R., Omaha, Neb.,	2d order,	10
Geo. C. Howard, Philadelphia, Pa.,		5
Merritt W. Burwell, New Haven, Ct.,		5
Westinghouse Electric Co., Pittsburgh, Pa.,	3d order,	5
Lawrence Machine Shop, Lawrence, Mass.,	17th order,	5
Lawrence Machine Shop, Lawrence, Mass.,	18th order,	5
J. A. Diamond, Indianapolis, Ind.,		5
F. J. Yandle, Santa Rosa, Cal.,		5
Aberdeen Packing Co., Astoria, Or.,		5
Total, 56 Engines.		1975



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